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## AGRO-ECONOMICS, POLICY, ORGANIZATION

### USE OF NORM-RESOURCE PLANNING IN LATVIA EXAMINED

Moscow EKONOMICHESKAYA GAZETA in Russian No 7, Feb 87 p 11

[Article by V. Bresis, 1st deputy chairman of Gosagroprom for the Latvian SSR and A. Boruks, head of a sector at the Latvian Scientific-Research Institute for Farming and Agricultural Economics: "Resources -- The Foundation for a Plan"]

[Text] Up until recently, one substantial shortcoming in agricultural planning was the fact that only weak attention was given to available resources when determining the volumes for the production and procurements of products and other plan indicators.

Quite often the kolkhozes and sovkhoses and also the rayon organs of administration were simply unaware as to how much equipment, fertilizer and other resources would be allocated for the coming year. Nor was the quality of the land always taken into account in the process. All of this led to a situation wherein the plan indicators were validated to only a weak degree.

The decree concerning improvements in the economic mechanism for management in the country's agro-industrial complex recommended the extensive use of the normative-resource method of planning. The control figures for state procurements of agricultural products and also the limits for logistical resources must now be determined based upon scientifically sound norms, developed taking into account the need for ensuring that each object of planning is supplied with the needed resources.

A definite amount of experience in the use of this approach has been accumulated in Latvia. Work has already been underway for some time here in connection with the use of mathematical methods and computers for planning work. Norms have been prepared for the cropping power of the agricultural crops and livestock productivity, depending upon the quality of the land and feed base and also for the labor expenditures and monetary-material resources needed for obtaining field crop husbandry and animal husbandry products.

#### How Can the Goal Be Achieved?

Based upon these developments, a complex of mutually related methods was created for introducing the normative method into planning and particularly

the method for distributing the volumes of state procurements of products among the RAPO's [rayon agro-industrial associations] and within the framework of a rayon among individual enterprises. In accordance with this method, control figures for agricultural product procurements for the period up to the year 1990 were computed and made available to each RAPO and recommendations were furnished on determining the plan tasks for the farms.

When developing the plan for state procurements of products, we first of all uncovered the resources available at each enterprise and for a RAPO as a whole and we determined the actual level of their use. Thereafter, we computed the expected increase in output during the plan period resulting from an increase in the production potential and an improvement in its use.

What are we including in the concept "production potential"? It includes the totality of production resources -- land and labor, fixed capital and the more important resources of industrial production (mineral fertilizers, concentrated feed and others). In addition, increasing importance is being attached in agriculture to such services as applying fertilizers to fields, land reclamation, repair of equipment and the transporting of goods, all of which are being carried out by the agrochemical service, land reclamation specialists and workers attached to repair technical enterprises. The resources of kolkhozes and sovkhoses are made available in conformity with the work volumes confronting these subunits. Overall, all of the mentioned resources and services describe the production potential of a RAPO on the whole and the individual farms.

When making this determination, we took into account the fact that field crop husbandry is the leading sphere of activity for agricultural enterprises, since it is on the basis of field crop husbandry that the other branches grow -- animal husbandry, processing of products, various trades. Thus we approached the matter of planning the production and distribution of the volumes of state procurements of products in stages.

During the first stage, we computed the output volume of field crop husbandry and its distribution by channels of use (sale to the state, other types of sales, expenditures for feed for the public herd and for the livestock of private plots). During the second stage, we planned the volumes of state procurements of animal husbandry products taking into account internally produced feed and that obtained from other sources. The norms for the consumption of forage per unit of all types of animal husbandry product were also determined.

Thus, during the first stage a determination is made concerning the production potential of RAPO's and all farms for obtaining field crop husbandry products and during the second stage -- animal husbandry products. Moreover, the production potential of farming includes those principal factors which exert a substantial influence on the volume and quality of field crop husbandry products: land areas, fixed capital and labor resources (excluding those which are used in animal husbandry, for the processing of products and in the trades), fertilizer obtained from the state and also agricultural services (services from the side). The production potential of animal husbandry

includes the capital and labor resources of this branch, internally produced feed and feed obtained from other sources.

And since the mentioned resources differ, a need arises for expressing them in a comparable form, in a single indicator. In order to determine this indicator, we must convert all resources and means of production into a monetary expression according to their value or contribution towards the formation of agricultural product. Thereafter the production potential of the entire farm is determined and also per hectare of land.

#### Towards a Common Denominator

An evaluation of land and labor resources is more complicated. We consider productivity to be the best indicator for evaluating agricultural land. According to computations carried out in the republic, the value of the annual output of field crop husbandry amounts on the average to 8 rubles per point of land value. Thus, land resources are included in the production potential by multiplying the land area by the evaluation points for the land and the constant coefficient of 8.

Labor resources are evaluated according to the total amount of wages for both permanent and other workers (excluding those engaged in animal husbandry, construction, working in trades or carrying out work on the side). The work performed by other workers, in view of their lack of professional training, is evaluated using a coefficient of 0.67.

All fixed capital, with the exception of land reclamation, since its influence is included in a land evaluation, and also that used in non-agricultural trades, is included fully in computations of the production potential. Since the influence of fixed capital is long-term in nature and since it differs for various types (buildings, various installations, machines), its effectiveness is more fully reflected by the total amount of amortization deductions.

Mineral fertilizer exerts a great influence on growth in field crop husbandry output. On average, each quintal of mineral fertilizer applied to the soil furnishes 5-6 additional quintals of feed units. Based upon the actual effectiveness of mineral fertilizer, compared to other production resources, they are included in the production potential at the rate of three times their value. Finally, agricultural services is presented as the value for services by service organizations.

#### Differing Farm Potential

Based upon the above-mentioned principles, the production potential was computed for all kolkhozes, sovkhoses and RAPO's. The trend towards a change in this potential over the past 10 years was also analyzed. Computations have shown that the value for the production potential of rayons fluctuates on the order of one to two and for farms it is even greater -- one to four.

Thus we have a complete picture of the actual potential of farms for the sale of agricultural products. It differs greatly from that which was presented earlier in the plans. A different degree of use of the production potential

is revealed. During the basic period, as an average for the republic, 30.3 quintals of feed units were produced per 1,000 rubles of potential. By regions, this indicator fluctuated from 27.2 to 33.5 and by individual farms -- from 21.2 to 40.1 quintals. Thus the effectiveness of use of the production potential during the basic period amounted to from 70 to 122 percent

The next portion of the task is that of establishing changes in the production potential for the period planned based upon the carrying out of land reclamation work, the allocation of new capital investments and mineral fertilizer limits and other factors. The initial data for solving this task: the status of affairs during the basic period (it is known) and the control figures for the state resources and limits allocated. But how are these limits distributed?

An analysis of data for the past 3-4 five-year plans has shown that economically strong kolkhozes and sovkhoses received more resources and that this resulted in a sharp differentiation in resource support -- 1:4. Thus, new concepts must be adopted so as to ensure that all farms have the potential for expanded reproduction and social development. Therefore, when developing a method for distributing the republic limits among the RAPO's and within them -- among the farms -- the following principle was used as the basis. Each RAPO is allocated resources in an amount which is not less than that for the basic period and the additional portion of the limits is directed to those RAPO's where the production potential is less.

#### Assisting Backward Elements

The task has been assigned of creating conditions for strengthening economically weak farms and providing them with more capital investments, resources for carrying out land reclamation work, mineral fertilizer and concentrated feed than they received in the past, since production development is primarily dependent upon these factors.

Such an approach is not in conflict with the principle of directing logistical resources to those areas where the greatest economic results can be expected from their use. It was proven long ago that production development is limited by negligible factors and that when the limitation is removed other production factors raise the return.

Once the increase in production potential has been determined, it is then possible to compute the planned increase in field crop husbandry output. Compared to the basic period, it can be obtained both by means of an increase in resources and also through the best use of available potential and the existing production technology. It was during this stage that we included a new factor in the computations -- scientific-technical progress.

The republic's plans call for one third of the grain crops to be cultivated using intensive technologies -- all of the winter crops and a portion of the spring crops. Experience has shown that their use makes it possible to obtain approximately 6 additional quintals of grain per hectare and thus for an average yield obtained using conventional technologies (24 quintals per



hectare), this amounts to an increase of 25 percent. Since the intensive technologies can be used on one third of the sowing areas, intensification and improvements in the culture of farming can produce an increase in field crop husbandry output on the order of 8.3 percent. This indicator was embodied in the computations during planning. And the overall increase in field crop husbandry output, compared to the average annual level for the preceding five-year plan, must amount to 21.1 percent. Having established the volume for this output, we determined how much of it would be used for state procurements, for covering the requirements of animal husbandry and for other needs.

Practically speaking, we employed this same approach in planning for animal husbandry. Growth in the output production of this branch can be achieved by increasing the feed, raising its quality and through improved use of the feed. In the process, attention is concentrated on the actual consumption of forage for the production of the various types of animal husbandry products and on the normative and planned productivity of the livestock. The difference between them reveals the reserves available for increasing production through the introduction of scientific recommendations and developments.

When determining the production volumes for the various types of animal husbandry products, we take into account farm specialization and the potential available for expanding existing branches or developing new ones. We computed several variants and selected the best. The results were turned over to the RAPO for approval. Where required, changes were made to the volumes and to the product procurement structure and the resources allocated were defined more exactly.

The objective coordination of resources allocated for the new five-year plan with the state procurement volumes for specific products prompted some RAPO's and farms to adopt a more thoughtful approach with regard to their requirements for additional resources. For example, the leaders of the Agra Scientific Production Association, the structure of which includes nine strong farms, following a thorough analysis of the opportunities available for increasing animal husbandry output, rejected a portion of the concentrated feed allocated to the association. The same action was taken by some other RAPO's. This made it possible to allocate additional resources to economically weak farms.

We are aware that the method developed by us is not perfect. But the chief goal was achieved: it has made it possible to determine in an objective manner the plan indicators and the resources required for achieving them.

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RESTRUCTURING OF RAPO TRANSPORT SYSTEM RECOMMENDED

Moscow EKONOMIKA SELSKOGO KHOZYAYSTVA in Russian No 2, Feb 87 pp 71-76

[Article by P. Sovetov, Candidate of Economic Sciences at Vologda Dairy Institute: "Improving the Administration of RAPO Motor Transport"]

[Text] Growth in agricultural production and its conversion over to intensive technologies are conditioned by the dependency of the final agricultural results upon the results of other branches of the agro-industrial complex.

Among these branches, special importance is attached to transport, without the active participation of which it is practically impossible to master effectively the additional investments associated with accelerating the intensification of production, achieving thorough specialization and concentration based upon inter-farm cooperation and agro-industrial integration and implementing a social transformation in the rural areas.

With growth in agricultural production at leading rates, increases are taking place in the volumes of freight shipments by motor transport for agriculture in Vologda Oblast. Compared to the level for the 10th Five-Year Plan, the average annual gross output volume for agriculture during the 11th Five-Year Plan (in comparable 1973 prices) increased by 11.4 percent, the volume of freight shipments increased by 14 percent and freight turnover -- by 29 percent.

The volume of motor vehicle shipments per hectare of agricultural land increased by 40.3 percent compared to the 1975 level and per hectare of arable land --by 27.4 percent. Freight turnover increased by 60 and 45.2 percent respectively. The volume of shipments and freight turnover increased considerably -- this was the result of the intensification of agricultural production, during which process new types of enterprises were created in agriculture, changes took place in transport relationships and in the structure and capacity of freight flow and additional types of transport operations appeared.

The totality of agricultural freight shipments, in terms of content, can be divided into two different groups from the standpoint of quantity: external-farm and intra-farm. For the oblast as a whole, roughly 70 percent of the freight transported by motor vehicles constituted internal shipments and 30

percent -- shipments between enterprises. In the process, 31 percent of the energy resources is used for internal shipments and 69 percent for external-farm shipments. Both types of motor transport services are mutually related and appear as two sides of the same production process.

Motor transport ensures the movement of material flows both within and between cooperating branches and enterprises of the agro-industrial complex. Thus the rhythmical nature of integrated production, the high economic indicators and the final results are dependent to a considerable degree upon the quality of the work being performed by the transport element. Since during the transporting process there is no increase in weight or change in the use value and yet the cost of the goods increases, the work of the motor transport formations must be subordinated to the chief goal and interests of the RAPO enterprises served and particularly the kolkhozes and sovkhoses as central elements of the APK [agro-industrial complex].

The chief task of motor transport is that of ensuring timely and coordinated technological processes for the production of agricultural products and for their storage, processing and sales. At the same time, raised requirements are being imposed with regard to the organization of an control over freight shipments. A need has arisen for organizing a system of motor transport services for agricultural production based upon such principles as timeliness, completeness, quality and thrift in the carrying out of freight shipments. This requires efficient interaction between the principal participants in the shipment process: freight customers, motor transport enterprises, freight shippers. The work of all elements of the road-transport system and the weighing, packaging, warehouse and refueling economy must be directed towards achieving more complete, timely, high quality and economic motor transport services.

During the past decade, important measures were undertaken aimed at improving motor transport support for agriculture. The transport pool of vehicles changed from the standpoint of both quantity and quality. The degree to which agriculture throughout the oblast has been supplied with trucks has increased. Their number per 1,000 hectares of agricultural land (taking into account those written off) has increased by 6.6 percent and their overall carrying capacity -- by 32.6 percent. Dumptrucks account for a considerable portion of the overall carrying capacity of trucks.

The average carrying capacity of one motor vehicle has increased; for the oblast on the average it is 5.6 tons. The garages of kolkhozes and sovkhoses contain motor vehicles with carrying capacities of up to 5 tons. At motor transport establishments of the Vologdaagropromkhiya Association, the proportion of motor vehicles with a carrying capacity in excess of 5 tons is 61 percent. The proportion of motor vehicles having a brief service life is high and fluctuates up to 31.7 percent at kolkhozes and up to 38.7 percent within the Vologdaagropromkhiya Association.

The agricultural motor vehicle pool has been augmented by the addition of new modern models of trucks. But despite the considerable growth in equipping the oblast's agriculture with trucks, and given the existing organization for utilizing them, there is still not enough trucks for carrying out the required

volume of freight shipments. For example, each year from 800,000 to 1 million tons of organic fertilizer are not moved out onto the fields and an average of 640,000 tons of road construction freight are not shipped to the construction areas for intra-farm motor vehicle roads.

It bears mentioning that since 1975 the transport expenses for the production of a unit of agricultural product have increased at kolkhozes by 142 percent and at sovkhoses -- by a factor of 2.31.

The growth in the number of motor vehicles has not been accompanied by an improvement in the technical-operational and economic indicators for their use. Each year, one third or more of the motor vehicles at many motor vehicle establishments lie idle. The inefficient use of rolling stock, the irrational organization of shipments and the low level of mechanization for loading and unloading operations --all of these factors cause harm to the national economy.

In the motor vehicle establishments of kolkhozes and sovkhoses, on the average during the 11th Five-Year Plan and compared to the results of the 10th Five-Year Plan, a decline took place in the technical readiness and utilization of the motor vehicle pool, in the coefficients for the use of a run and working time and the productivity of motor vehicles decreased. As a result, the production costs for freight shipments increased: at kolkhozes -- from 137.9 kopecks for 10 ton-kilometers in 1976-1980 to 142.2 kopecks in 1981-1985, at sovkhoses -- from 117.8 to 124.5 and at the Selkhozavtotrans ATP [motor transport enterprise] -- from 40 to 40.6 kopecks respectively. Moreover, the productivity level of a motor vehicle pool for kolkhozes and sovkhoses, per average written off motor vehicle ton, was considerably lower than that at enterprises of external-farm motor transport -- in 1981-1985 at kolkhozes 212.3 tons, at sovkhoses 276.6 tons and at the Selkhozavtotrans ATP 969.6 tons.

Such a situation in connection with the use of motor vehicle transport is by no means accidental. At the motor transport establishments of Selkhozavtotrans and other associations, daily attention is being given to the organization of freight shipments and to analyzing the results of motor transport operations and, as a result, high technical-operational and economic indicators are being achieved. This is the result of laborious work aimed at improving them. The planning and organization of kolkhoz and sovkhos transport operations are somewhat worse.

An indifferent and parasitical attitude has developed among some agricultural leaders and specialists in connection with the use of motor transport facilities, owing to the fact that the state, when necessary, brings in the required number of drivers and items of transport equipment from other branches of the national economy. The kolkhoz and sovkhos officials, as a result of the unsatisfactory organization of loading and unloading operations and an unwillingness to pay fines for above-normal vehicle idle time, increase their volumes of work carried out. This is being promoted to a large degree by the absence in the production-financial plans for agricultural enterprises of a limit for transport expenditures.

The opportunities for radically improving the operation of a motor vehicle pool and raising substantially the quality of motor transport services, under the existing forms for organizing transport operations in agriculture, are extremely limited. Almost every branch of the agro-industrial complex has its own separate network of motor transport enterprises, engaged in independently solving the problems concerned with their distribution and staffing. At some of these points, freight motor transport enterprises of the service sphere operate simultaneously and independently of one another, while often carrying out identical freight shipments. In the motor transport establishments of Vologdaagropromkhiya, construction materials constitute 30 percent of the structure of goods being transported, Selkhozavtotrans -- 72.6 percent, peat -- 18.3 and 3.2 percent respectively, mineral fertilizer -- 9.2 and 1.3 percent, agricultural products -- 3.9 and 5.9 percent and so forth.

The dispersion of a freight motor vehicle pool leads to a dispersion of capital investments and difficulties in placing them in operation and it inhibits the creation of a satisfactory production base, which adversely affects the use of the motor vehicles.

The subordination of motor transport facilities to various departments complicates the organization of freight shipments and enables motor transport enterprises of the service sphere to avoid shipments of unprofitable freight. These enterprises compete against one another in a search for more profitable freight shipments. In the process, an increase takes place in the turnover of driver personnel, a deterioration takes place in the attitude towards the motor vehicles entrusted to their care and the implementation of measures aimed at strengthening labor discipline in the collectives of motor transport enterprises becomes more difficult.

The motor transport enterprises of agroprom operate on an individual basis and are interested in developing a maximum amount of freight turnover and in obtaining a large amount of earnings. Meanwhile, the kolkhozes and sovkhoses being served are interested in the carrying out of freight shipments during the best agrotechnical periods and with minimal expenses. A shortage of motor transport equipment in the national economy enables the motor transport enterprises to select freely their clientele outside the sphere of agricultural production, where the operating conditions for the rolling stock are often more favorable and the earnings of the drivers considerably higher.

In the volume of shipments by external-farm motor transport, the proportion of kolkhoz and sovkhos freight is inadequate -- it does not reach 70 percent (in the majority of instances 50 percent), despite the directive instructions which call for a minimal level for such work.

The insufficient proportion of kolkhoz and sovkhos freight, compared to the overall volume of shipments by motor transport of the service spheres, is conditioned by the fact that agriculture is a less profitable customer for motor transport enterprises. The predominance of short routes and difficult to transport freight, the low degree of mechanization of loading and unloading operations and also the unsatisfactory condition of intra-farm roads does not ensure the complete realization of the high operational qualities of modern motor vehicles.

Additional difficulties in organizing the loading of rolling stock are created by the specific nature and broad nomenclature of the freight being shipped (up to 65 types), by the urgency attached to their deliveries and by the disparity between the points for delivering the products and obtaining materials.

These peculiarities preclude the possibility of the motor transport enterprises achieving maximum effectiveness in their use of the rolling stock for transporting the freight of kolkhozes and sovkhozes. An analysis of the earnings from freight shipments during 1984 at the Selkhozavtotrans ATP reveals that 30.7 percent was obtained from the use of transport for delivering kolkhoz and sovkhoz freight, 25.4 percent -- that of other subunits of the APK and 43.9 percent -- that of other enterprises and organizations. The earnings per ton of freight shipped and per motor vehicle-day in the delivery of kolkhoz and sovkhoz freight comes to a small amount -- 61.4 rubles, whereas for delivering the freight of other enterprises and organizations -- 88.5 rubles.

The motor transport enterprises of the service sphere are not interested in freight shipments over dirt roads or in carrying out harvesting or other types of work. For example, according to our computations the production cost for transporting potatoes 25 kilometers over dirt roads is 23-26 percent higher than over improved surface roads. Yet the rate for such deliveries is the same. Owing to this fact, the expenses of motor transport enterprises for shipping freight over dirt roads are not repaid and thus this represents one of the reasons why the motor transport workers are reluctant to carry out such freight shipments.

The existing system of payments for freight shipments by motor vehicle transport (Price List No. 13-01-01) provides only for quantitative criteria -- volume and distance of shipment. Meanwhile, for the purpose of agricultural enterprises, great importance is attached to the delivery schedules, that is, to timeliness in the carrying out of transport operations. These peculiarities are not reflected in the rates. The kolkhozes and sovkhozes suffer product losses when shipments are carried out in an untimely manner and yet the transport enterprises bear no responsibility for this. At the same time, the idle time of motor transport equipment during loading and unloading operations is concealed by the client through the formulation of transport documents based upon an hourly rate and this precludes the motor transport enterprises from employing fines and sanctions for the idle time. The situation is further complicated by the fact that the existing system for the presentation of claims regarding the non-fulfillment of shipment volumes or failure to present freight for shipment is extremely complicated by the need for preparing special documents.

Under conditions involving the isolation of transport equipment, it is impossible to combine successfully the economic interests of motor transport enterprises with the final goal of agricultural production. The transport enterprises are able to select more profitable shipments in terms of distances, road conditions and types of freight.

During the formation and subsequent reorganization of the rayon agro-industrial associations, the required amount of attention was not given to the problems concerned with improving motor transport services for agricultural production. It was assumed that the motor transport of enterprises engaged in servicing agricultural production would be included in a RAPO structure and would be employed for achieving good final results. However the motor transport enterprises of the service spheres remained isolated organizationally and their economic relationships with kolkhozes and sovkhoses were not improved.

Within the oblast's agro-industrial complex, the pool of trucks exceeds by a factor of 6.6 the amount of motor transport rolling stock of general use. But the latter is a part of the oblast's independent Vologdaavtotrans Association, which together with its functional administrations and departments and regional transport associations, possesses a developed production infrastructure. At the same time, the entire motor transport service is represented in the oblast agro-industrial committee by two (five units each) structural subunits of the mechanization administration and the Vologdaagrostroy Association. The RAPO's administrative staff lacks a motor transport element. Such an approach towards the formation of an administrative structure for agricultural motor transport is not in keeping with the accelerated elimination of the large shortcomings which exist at the present time in the use of the motor vehicle pool. The trend which sees the rates of growth in transport expenditures exceeding the rates of growth in the production volumes for agricultural output has become rather stable in nature.

The need for adopting urgent measures aimed at regulating the organizational-economic mechanism for controlling motor transport services for agriculture is rather obvious. The reorganization of the administrative structure of the APK [agro-industrial complex] is presenting an opportunity for creating a single motor transport service for the rural areas.

In our opinion, in order to ensure timely, complete, high quality and economic motor transport services for agricultural production, the separate motor transport subunits found within the APK must be transformed into a single agricultural motor transport system, with sub-systems for intra-farm and external farm motor transport. The program for the functioning of this system will be determined by the special purpose tasks of territorial agro-industrial committees (associations) for increasing the production and sale of high quality agricultural products, with minimal expenditures of labor and resources. Optimum conditions are being created for developing each of the two sub-systems for agricultural motor transport, in conformity with their functional responsibilities and within the complex for motor transport support for the agro-industrial production process. The size and structure of external-farm motor transport will be optimized in close association with the functioning of intra-farm motor transport and the size and structure of intra-farm motor transport -- with the formation and functioning of external-farm motor transport being taken into account to the maximum possible degree.

With the formation of a complete sub-system for external-farm motor transport, favorable conditions will appear for improving the economic relationships of a motor transport enterprise with the enterprises and organizations being

served, aimed at achieving the final results of agriculture in an effective manner. The essence of these relationships consists of ensuring that they will be based mainly upon conditions of equal partnership among the enterprises and organizations participating in joint production. This implies that the results realized must belong to each of the participants to the extent of their contribution towards this production.

In the interest of establishing optimum economic relationships between the rayon motor transport enterprise on the one hand and kolkhozes and sovkhoses on the other, it will be necessary to implement changes in the existing system for planning freight shipments and economic incentives for the workers.

First of all, an average annual limit for transport expenditures for the five-year plan, one which can be changed only in exceptional cases, must be established for each agricultural enterprise by a higher organ. The planned requirement for shipments is determined based upon the production program for field crop husbandry, animal husbandry and the processing of agricultural products, with the development of a production and social infrastructure being taken into account.

Secondly, the volume of shipments to outside enterprises and organizations must be strictly limited and be determined not for the purpose of obtaining more profit but only based upon the need for ensuring a uniform workload for the rolling stock. The profit realized by a motor transport enterprise from such above-plan shipments is transferred over to the budget fully and no bonuses are awarded to workers for carrying out this work.

Thirdly, the production relationships of a motor transport enterprise with enterprises and organizations served must be established as a rule on a contractual basis. The computations with a motor transport enterprise for the carrying out of transport services must be calculated on the basis of unified rates (Price List No. 13-01-01) and corrected as necessary -- based upon the purpose and peculiarities of use of motor transport in agriculture. In the process, the size of the tariff rates must be such that a motor transport enterprise is able to cover its expenses for carrying out freight shipments and have sufficient savings for forming its economic incentive fund.

Fourthly, the carrying out of freight shipment volumes on the basis of contracts must be taken into account when making deductions for the economic incentive fund of a motor transport enterprise. This requirement must be established as one of the conditions for material incentives to be issued to workers attached to the administrative staff of a motor transport enterprise. In addition to incentives being established for the collective of a motor transport enterprise at the end of the year for the final results of agricultural production, there are also current awards for the carrying out of tasks, the observance of schedules, timeliness and high quality work. No changes should be made to special types of bonuses (for carrying out the plan for the delivery of motor vehicle tires for restoration, reprocessing of ferrous and non-ferrous metals, economies in the use of fuel and lubricating materials and ensuring full loads for motor vehicles).



An evaluation of the level and effectiveness of motor transport services must be carried out in accordance with the level of fulfillment of the principal requirements imposed upon them, that is, completeness, timeliness, quality and economy of operation. The degree of observance of these requirements can now be expressed quantitatively using appropriate coefficients. The technical-economic indicators presently in use in motor transport operations for the rolling stock are also needed, since they define the intra-transport effect. However, in connection with use of the mentioned principles for production and economic relationships of a motor transport enterprise with the consignees or shippers of freight, they will not occupy a preferential position when evaluating the level of transport services for agricultural production.

Workers attached to agricultural enterprises are not indifferent to the level of transport expenditures for the production of goods. A proposal has been made in this regard to establish an indicator for motor transport expenditures at the rate of 1,000 rubles worth of gross and marketable output per 1,000 hectares of arable land, one which will describe not only the amount of expenditures but also to a certain degree the transport-intensiveness of the gross and marketable output.

The conversion of separate elements of external-farm motor transport into a new organizational form -- a single inter-farm motor transport enterprise of a RAPO -- requires a more improved, efficient and effective administrative organization and particularly the development of an efficient administrative staff.

The use of a systematic approach in organizing the administration of external-farm motor transport for RAPO's will make it possible to form an optimum structure for a motor vehicle pool, introduce progressive technologies for the transport process into operations on an extensive scale, increase the proportion of container shipments and centralized freight deliveries, solve specific transport tasks using economics-mathematical methods and achieving unity in future, current and operational planning for freight shipments. Intraorganizational accounting and economic incentive measures for workers for complete, timely, high quality and thrifty carrying out of freight shipments will be developed in a consistent manner. The administration of motor transport services for agriculture in a rayon will be carried out by a single center and a real opportunity will appear for improving logistical supply for motor transport establishments, for lowering personnel turnover and for raising labor discipline.

The transformation of agricultural motor transport into a single system is creating the prerequisites required for successfully developing the production-technical base for motor transport operations in the rural areas and it is also making it possible to develop the agricultural infrastructure based upon principles of uniformity and proportionality. The organization of the technical servicing and repair of rolling stock will be improved to a considerable degree.

The introduction of the proposed complex of measures for improving the organizational-administrative structure for the functioning of an agricultural motor vehicle pool will make it possible to raise substantially the

effectiveness of use of rolling stock and agricultural production on the whole. In addition, it will promote an acceleration in scientific-technical progress in the agro-industrial complex.

[Editorial note:] The article by P. Sovetov entitled "Improving the Administration of RAPO Motor Transport" has been reviewed by the Administration for Improving the Economic Mechanism and Price Formation of the Main Administration for Planning the Social and Economic Development of the APK of USSR Gosagroprom. The deputy chief of the administration V.I. Shtanov and the chief of the Department for Improving the Organizational Structures of Administration V.Ya. Parshin issued the following report to the Editorial Board:

It is our opinion that the proposals by the author are deserving of discussion. If they are recommended for practical use, all enterprises and organizations of a rayon agro-industrial association must be participants of an inter-farm motor transport enterprise.

In evaluating the work of this enterprise, the importance of such indicators as the carrying out of contractual tasks, observance of schedules for freight shipments, economies in the use of motor transport equipment and others must be raised. It is not considered advisable to substitute summary coefficients for the mentioned indicators. The indicator for a limit on transport expenditures must be considered as being more realistic in actual practice.

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## LIVESTOCK AND FEED PROCUREMENT

### LIVESTOCK SECTOR TECHNOLOGY POTENTIAL UNDERUTILIZED

Moscow SELSKAYA ZHIZN in Russian 4 Mar 87 p 1

[Editorial: "Intensive Technologies for the Farms"]

[Text] Last year the workers attached to animal husbandry farms worked in a fine manner: the branch, which had stood idle for a considerable period of time, suddenly began moving forward. Meat production increased by 8, milk -- by 5 and eggs -- by 6 percent. Overall, 101.1 million tons of milk, 17.7 million tons of meat and 80.3 billion eggs were obtained throughout the year. This was the first time that such results had been achieved by the workers attached to this branch, the development of which means so much for the well-being of the people.

This was the result first of all of intensification and improvements in the productivity of the livestock and poultry. Thus the delivery weight of cattle increased during the year by 20 kilograms and cow milk yields increased by 151 kilograms. An improvement was noted in the egg productivity of hens. Improvements were realized in the yield of young stock and in protecting the animals.

Nevertheless, as yet only the first step has been taken. On many farms throughout the country, the productivity of animal husbandry is low. A majority of the dairy farms are obtaining less than 3,000 kilograms of milk from each cow and the daily weight increases in cattle during fattening rarely exceed 550-600 and hogs -- 350-450 grams. At the same time, science and leading practice have proven that considerably higher results can be achieved in any zone throughout the country. This has been made possible by the genetic potential of the animal strains that we have developed, by the feed base that has been created and by the level that has been achieved in technological support for the farms and complexes.

Today importance is being attached to taking full advantage of the above factors and to utilizing the existing production base to the maximum possible extent. Herein lies the source for the achievements of leading farms. There is no need for enumerating them -- in every oblast and republic and in many rayons, there are kolkhozes and sovkhoses, inter-farm enterprises and state industrial complexes which have achieved results in animal husbandry that surpass the average indicators to a considerable degree. If we analyze their

activities, then we inevitably draw the conclusion that they became leading farms owing to the fact that they mastered the intensive technology for animal husbandry.

At the present time, the specialists of Gosagroprom [State Agroindustrial Committee] and workers attached to agricultural institutes, having summarized leading experience and scientific recommendations, are completing their development of intensive technologies for the production of animal husbandry products. Despite their diverse nature and dependence upon the type and use being made of the animals, the natural and economic conditions of a farm and the technical equipping of the farms, these technologies have their own particular characteristics: they call for the creation of the best conditions for the livestock and poultry throughout all periods of their life, commencing at the moment that life begins for the young stock and ending with the production of finished products. At each farm and complex, importance is attached to organizing and developing production and scrupulously carrying out each technological regulation in a manner such that the best conditions are created for developing a good genetic potential for productivity with minimal expenditures of labor and resources.

Just as in field crop husbandry, where an intensive technology produces full results only when all of the required operations are carried out, a high productivity is achieved in animal husbandry only in those areas where, with no exceptions, the zootechnical rules are fully observed. It makes little sense to increase the milk yields of cows if the herd is being replaced by underdeveloped heifers. Even intensive final fattening will not compensate for losses caused by poor reproduction or raising of young stock. No type of inter-strain crossing can replace a strong feed base. And just one area of neglect in the work of the veterinary service can negate the efforts of an entire collective. In short, there are no matters of secondary concern in the intensive technology for animal husbandry.

Scientific studies and the experience of leading workers have shown that flow line-shop or so-called separate-shop systems for the production of goods and for reproduction of the herd conform best of all to the requirements established for intensive technologies in dairy and beef cattle husbandry and swine and sheep raising. In those areas where they are in use, increases are being noted in the milk yields and daily weight gains, improvements are taking place in the yield and protection of young stock and labor expenditures are declining. An important task of specialists and leaders attached to agro-industrial committees and associations is that of ensuring that these systems are mastered rapidly on each farm.

The intensive technology for animal husbandry is unthinkable unless use is made of industrial methods for the production of milk and meat. At the present time, clear and considerable advantages have already been achieved for the dairy and meat complexes, animal productivity at these facilities has increased noticeably and labor expenditures, a very important factor, are several times lower than those of conventional farms. This factor must be taken into account by the leaders of gosagroproms in Azerbaijan, Georgia and Kazakhstan, where the degree to which the planned capabilities at dairy complexes have been mastered is especially low. By no means are the complexes

for raising and fattening cattle in Turkmenia and Kirghizia operating at full capability. Industrial production methods that are based upon the complete mechanization of labor-intensive processes must also be employed on conventional farms. Here we have in mind not only their technical re-equipping, but particularly their conversion over to progressive forms for labor organization, to a division of labor and intra-branch specialization and to the introduction of a regulated working day.

The introduction into animal husbandry of intensive technologies requires harmonious and coordinated efforts on the part of many elements of the agro-industrial complex and maximum support for local party and soviet organs. Important tasks must also be solved by the scientific institutes. But the center of gravity in the carrying out of this work rests with the labor collectives themselves. An important task of the farm specialists and leaders and the party and trade union organizations is that of ensuring that the personnel receive training in all of the operational methods, that they are interested from both a moral and material standpoint in achieving high final results with minimal expenditures and that they are convinced regarding the need for working in accordance with the new methods.

Stagnant phenomena are being overcome within the country's animal husbandry program and notable positive advances have been achieved. The conversion over to the use of intensive technologies in all areas will make it possible to make this process more dynamic in nature and not only to retain but also to strengthen the rates of growth for the production of farm products.

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## POLICY, ORGANIZATION

### GOSPLAN SPECIALIST ON RETAIL TRADE TURNOVER PERFORMANCE

Moscow SOVETSKAYA POTREBITELSKAYA KOOPERATSIYA in Russian No 2, Feb 87 pp 2-5

[Article by A.S. Neshitoy, chief of the Combined Department for Trade Resources and Commodity Turnover of USSR Gosplan: "New Goals -- New Approaches"; first 3 paragraphs are source introduction]

[Text] As is known, this year, the second year of the five-year plan, workers attached to the cooperative trade must raise the quality of trade services sharply and achieve a considerable increase in commodity turnover. This is not a simple task and to a large extent it is complicated by the fact that a number of potrebosyuzes [unions of consumers' societies] did not fulfill their commodity turnover plans for last year. They must recover the ground lost.

Some trade organization leaders are inclined to blame the lag on a shortage of marketable resources. Actually, the causes derive from weak use of the existing potential and reserves.

In this article, the chief of the Combined Department for Trade Resources and Commodity Turnover of USSR Gosplan, A.S. Neshitoy, furnishes information on the trade situation during this new year.

The first year of the five-year plan was a year of tense labor and it marked the start of the reorganization in all spheres of life throughout the country, a movement which is increasing in intensity. It was characterized by notable qualitative changes in economic development. Based upon implementation of the scientific-technical programs called for in the five-year plan, the increase in the overall volume of industrial production amounted to 4.9 percent, against a plan which called for 4.3 percent. Labor productivity in industry increased by 4.6 percent (with growth of 0.5 percent compared to the planned figure). Moreover, 96 percent of the increase in output was achieved by means of raised labor productivity.

Improvements were noted in the carrying out of contractual obligations. Increases took place in the production of many types of consumer goods: fabrics, knitted goods, radios, refrigerators, furniture and so forth.

The strengthening of the logistical base of the agro-industrial complex and improvements in the effectiveness of its use enabled the food branch of the

APK [agro-industrial complex] to ensure for the most part the production of food goods in the volumes planned. Compared to 1985, meat production during the first year of the five-year plan, including that from state resources, increased by 8 percent, animal oil by 6, whole milk products (in a conversion for milk) by 5, fruit juices by 47 and non-alcoholic beverages by 30 percent. It is important to note that in the process the production of liqueur and vodka products and wine-making products declined by more than one third.

Based upon economic growth, the program adopted by the CPSU Central Committee for the country's social development was carried out in a consistent manner. The wages of manual and office workers and kolkhoz members were raised, increases took place in payments from the public consumption funds, labor organization was improved and the campaign against unearned income was further stimulated.

Notable positive achievements were also realized in the development of trade, including in the trade activities of consumer cooperation. The branch's chief economic indicator - the volume of retail commodity turnover -- last year amounted to 331.9 billion rubles in state and cooperative trade, reflecting an increase compared to the previous year of 19.5 billion rubles, in comparable prices. Nevertheless, for the country as a whole the overall plan for retail commodity turnover was not fulfilled.

A substantial increase was realized in the sale of important food products to the population -- whole milk products and cheese, meat, eggs, fish and fish products, confectionery items, tea, vegetables, vegetable oil, fruit and vegetable juices and non-alcoholic beverages.

Of the non-food goods, the sales of clothing and underwear, knitted goods, hosiery, footwear, furniture, refrigerators, washing machines, television sets, including color television sets, bicycles and tape recorders increased at high rates.

In connection with the intensive development of collective horticulture and gardening and private housing construction in the rural areas, lumber sales increased considerably (by 28 percent).

As a result of measures aimed at reducing the sale of alcoholic beverages, a substantial decrease was noted in the purchases of such products by the population. The reduction in the level of alcoholic beverage sales promoted an overall improvement in the structure of consumption and in the general situation throughout the country. There was a general decline in absenteeism from work, highway-transport accidents, and in domestic injuries and accidents.

Important natural improvements have taken place in the structure of commodity turnover -- both from the standpoint of general improvements and also with regard to bringing the sales level for important types of goods closer together in cities and rural areas. First of all, the proportion of non-food goods compared to the overall volume of commodity turnover in state and cooperative trade has been raised. Moreover, this trend is clearly apparent in the structure of cooperative turnover. In commodity turnover for consumer

cooperation, notable increases have taken place in sales to the population of meat and meat products, milk and dairy products, vegetables, fruit, berries and canned fruit and berries. The proportion of alcoholic beverages has declined substantially.

If we analyze the structure of commodity turnover for consumer cooperation in terms of non-food goods, then we notice an increase in the proportion of sales of clothing and underwear, knitted goods and footwear, while at the same time the proportion of the sales of these goods remained essentially without change throughout the country as a whole. The proportion of sales of furniture, carpets and carpet products, radios, domestic electric appliances, sporting goods, bicycles, motorcycles, lumber and construction materials and small automobiles also increased. The merging of the structure for commodity turnover in consumer cooperation with that for state trade in fancy goods, perfume and cosmetic products, paper and office supplies and jewelry products can be clearly traced.

Nevertheless, the positive changes in trade could be more meaningful if the cooperative organizations and enterprises were to make more complete use of the potential of the diversified economy for consumer cooperation. Here we have in mind current, mainly organizational, and also long-term factors for economic growth. According to today's measurements, the organization of trade services in the rural areas cannot be considered as satisfactory. If not this reason and also the low level of planning and economic analysis, lack of interest and also emphasis on old managerial and administrative methods, then what can explain the non-fulfillment of the commodity turnover plans for last year?

Commencing this year, long-term, high quality factors for economic growth must be introduced into operations on an accelerated basis -- the introduction of new equipment and technology, reorganization of investment policy and the mastering of cost accounting work methods. These are precisely the factors which, in the future, will determine the results of management. Meanwhile, last year's results revealed that these are still the most vulnerable areas in the work of cooperative organizations and enterprises. The tasks for modernization and technical re-equipping in trade, public catering, procurements and production operations were not fulfilled. No substantial progress was achieved in the mechanization of warehouse or loading and unloading operations. Just as in the past, manual labor predominates in the procurement and public catering branches.

Commercial work and the mechanism for relationships with industry are being reorganized to only a weak degree. Control over deliveries of goods in conformity with contractual obligations is unsatisfactory. Even taking into account the deliveries of light industry products to the state and cooperative trade by individual industrial associations and enterprises of USSR Minlegprom [Ministry of Light Industry], the trade organizations were undersupplied, according to contracts concluded for goods of this group, by more than 500 million rubles worth of goods.



Just as in the past, the proportion of clothing and footwear for youth (5-7 percent), especially fashionable items (approximately 2 percent), remains negligible compared to the overall volume of goods being delivered to market.

Quite often, the goods offered for sale in the stores are not in keeping with the season of the year. A wholesale element does not carry out its seasonal accumulation of goods in a satisfactory manner, it maneuvers its resources in a poor manner and it reorganizes its commercial work only weakly in conformity with the demands of changing market conditions. According to data supplied by USSR TSU [Central Statistical Administration], for example, the degree to which trade is being supplied with knitted goods in some oblasts of Uzbekistan is higher by a factor of three than the average for the country. In a number of oblasts in the Russian Federation and the Ukrainian SSR, the availability of sewing products is sufficient for 100-110 days of trade and in some oblasts in the Ukraine and Kazakhstan -- for 230 to 370 days.

Under tense conditions in the availability of marketable resources for many non-food goods in trade, 2.1 billion rubles worth of unmarketable and old goods which were not in keeping with the population's needs accumulated (3.6 percent of the overall supplies of goods of the non-food group). Approximately one half of these goods were concentrated in consumer cooperation, notwithstanding the fact that, as is well known, it accounts for less than 30 percent of the country's commodity turnover and slightly more than 40 percent of the supplies of non-food goods.

The commercial apparatus is making only weak use of the economic mechanism for having trade exert an active interest on industry in connection with accelerating renewal of the assortment and improvements in the quality of the goods. The Kutaisi and Leninakan production sewing associations have been operating for an extended period of time in the absence of substantial improvements in the quality of their products. Over the past 5 years, from 30 to 50 percent of the clothing produced and inspected at the Baku Sewing Factory imeni Volodarskiy was rejected. The footwear being produced at the Tashkent, Kuznetsk and Baku shoe factories and at the Irkutsk and Frunze footwear associations is of low quality. The Omsk and Shaulayay television plants are regularly supplying the trade with color television sets of unsatisfactory quality. The products being produced by the Minsk Radio Plant imeni 50th Anniversary of the Communist Party of Belorussia, the Lvov Production Association imeni 50th Anniversary of October and the Estonian Punane-Pet Association, all of which produce radios, are not meeting the requirements of the consumers in terms of quality. The domestic refrigerators being produced by the Samarkand and Dushanbe plants are known for their lack of reliability and low quality.

The proportion of goods bearing the index "N," compared to the overall production of goods of a cultural-domestic and economic nature, is approximately 11 percent. The proportion of progressive models, marks and types of products which are in high demand by the population is extremely low. Of the overall volume of products being produced for the corresponding group, freezers and refrigerators of such marks and models constitute only

approximately 3 percent, twin-compartment refrigerators -- 15 and semi-automatic washing machines -- up to 20 percent.

From January to September of last year, complaints were received and repair work had to be carried out on two thirds of the color television sets turned over to the trade network by enterprises of Minradioprom [Ministry of the Radio Industry], approximately 40 percent of the products of Minpromsvyazi [Ministry of the Communications Equipment Industry] and Minobshchemash [Ministry of General Machine Building], 43 percent of the tape recorders produced by enterprises of Minpromsvyazi and 27 percent of those produced by USSR Minradioprom. As you can see, the field of activity for trade is tremendous here. Certainly, state acceptance is mainly responsible for improving the quality of the consumer goods and yet, as the saying goes, the trade must not be caught napping.

Owing to unsatisfactory trade organization and also insufficient deliveries of a number of goods, notwithstanding overall fulfillment of the commodity turnover plan, the population's demands for many products are not being satisfied fully. This applies to construction materials, fruit and vegetable products, potatoes, baked goods and macaroni products, eggs and also salt. During the past year, the trade was supplied with roughly 50 percent of the annual volume of marketable supplies of lumber, approximately 70 percent of the plant manufactured wooden homes, part kits for homes, saw-timber and plywood. The population is not being supplied adequately with local construction materials.

In cities and worker settlements, full use is not being made of the opportunities available for increasing the sales of agricultural products purchased by consumer cooperation at contractual prices. The plans for the sale of agricultural products are not tense and they fail to stimulate the cooperative organizations into developing this turnover. Last year the plan for commodity turnover by kooptorgs [cooperative trades] in Uzbekistan, the RSFSR and Estonia was overfulfilled by 10-11 percent, Moldavia, Turkmenistan and Belorussia -- by 15-21, Latvia -- by 32 and Lithuania -- by 43 percent. Meanwhile, compared to the overall sales volume for food goods in state trade and consumer cooperation, the proportion of commodity turnover for the kooptorgs is negligible and over an extended period of time amounts to 4.3-4.5 percent and in a conversion to state prices -- only 2.2 percent.

The turnover of the kolkhoz market exceeds by roughly twofold the turnover of municipal kooptorgs. For all practical purposes, no change in taking place in the structure of commodity turnover for the kooptorgs. Roughly two thirds of the volume consists of meat products and only one fifth -- for potatoes and fruit and vegetable products. Consumer cooperation has not activated properly the procurements of potatoes and fruit and vegetable products from kolkhozes, sovkhoses and other agricultural enterprises, which they are authorized to sell at the rate of 30 percent of the planned procurement volume. According to data furnished by USSR TsSU, in 1986 the amount of potatoes procured amounted to only 0.2 percent of the overall volume of procurements by consumer cooperation, vegetables -- 1.5, fruit and grapes -- 2.3 and melon crops -- 2.2 percent. Consumer cooperation must utilize its rights and opportunities more fully. Judging by the fact that the kolkhozes and sovkhoses have not launched

the sale of agricultural products at the kolkhoz markets, it would appear that the cooperation specialists have large reserves at their disposal in this regard. And a new planned task has been formulated taking these reserves into account. In 1987 the sale of agricultural products within the cooperative trade network must be increased by a factor of 1.3 (from the standpoint of value).

The plan for developing trade during the second year of the five-year plan is oriented to a considerable degree towards existing reserves and opportunities and towards strengthening positive trends and eliminating the shortcomings tolerated in the past. The retail commodity turnover of consumer cooperation per individual will be developed at higher rates than the turnover in state trade. All of the prerequisites are available for accomplishing this.

According to computations by USSR Gosplan and Tsentrsoyuz [Central Union of Consumers' Societies], the plans call for the organizations of consumer cooperation to be provided with 1.3 billion rubles this year for developing the logistical base for all branches of the economy. This figure is higher by 10.5 percent than the volumes for last year. For comparison: the plans call for 2.2 billion rubles worth of capital investments in the country's trade branch -- 23 percent more than in 1985.

Special attention will be given to erecting store-bases for the construction materials trade, procurement and processing enterprises and also cooperative stores in cities for the sale of agricultural products procured at contractual prices.

The plans call for the placing in operation of cooperative general trade warehouses with an overall area of 535,000 square meters, storehouses capable of holding 71,000 tons of potatoes, vegetables and fruit and distribution refrigerators for 19,400 tons of one-time storage. These tasks conform to the five-year plan, the All-Round Program for Goods and Services and to the Basic Directions for the Economic and Social Development of the USSR During the 1986-1990 Period and for the Period Up To the Year 2000.

This year's plan calls for the further carrying out of scientific-technical programs directed towards the introduction of a progressive technology for the movement of goods, with use being made of packaging equipment in trade and industrial complexes involving the use of functional capacities and containers in public catering.

Market support for retail commodity turnover has been developed based upon the production volumes for consumer goods called for in the plan, the tasks for which surpass the tasks for the All-Round Program for Developing the Production of Consumer Goods and the Sphere of Services for the 1986-2000 Period. At the same time and in connection with intensifying the campaign against drunkenness and alcoholism, maximum use must be made of the internal reserves within the sphere of trade in order to ensure the successful carrying out of the commodity turnover plan for 1987: improvements in control over marketable resources, an acceleration in their turnover rate, improvements in wholesale and retail trade and increased influence on industry in order to

achieve timely delivery of goods in the required assortment and in a state of high quality.

More active utilization of these reserves must be promoted by the new conditions for management, which will be employed this year by all branches of industry, the agro-industrial complex and trade. As a result of the extensive use of cost accounting and economic administrative methods, objective prerequisites are being created for increasing the role and responsibility of ministries and departments and the independence of organizations and enterprises in achieving more complete use of the production and scientific-technical potential, mobilizing internal reserves and the potential for production intensification, raising labor productivity and developing the initiative of labor collectives. Under these conditions, the center of gravity in the formation of plans for the production of goods, in accordance with their nomenclature, rests with the ministries, departments, production associations and enterprises, which in their computations of the plan indicators rely upon the orders received from trade organizations.

During the preparation of orders for goods, the principal difficulty has to do with the need for ensuring the availability on the market of an entire complex of goods in conformity with the needs expressed by various groups and layers of the population. It is known that at the present time the problem of saturating the market from the standpoint of quantity has for the most part been solved. In 1987, the requirements for confectionery and macaroni products, sugar, fish and canned fish products, vegetable oil, margarine products, mayonnaise, egg products, potatoes, vegetables, melon crops, fruit, non-alcoholic beverages and mineral waters, many types of goods of a cultural and domestic nature, lumber and construction materials, medicines, publications, motor vehicle gasoline and kerosene are being satisfied fully. The resources of fabrics, motor vehicle tires, all types of dishware, footwear, paper goods, plastic products and others have been increased considerably.

However, despite a saturation in terms of the overall volume of marketable resources, the market is still experiencing a shortage in certain types and models of products and in many instances the demand for goods is still not being satisfied fully. This applies, for example, to high quality and fashionable goods. Based upon use of the new economic mechanism, extreme importance is being attached to improving the effect of trade with regard to accelerating the development of the production of such goods, particularly in accordance with contractual prices, and to expanding the sales network for them. This will make it possible, during the course of carrying out the commodity turnover plans, to realize a substantial increase in resources.

Hence, at the present time, as never before, a need exists for an active and purposeful position to be taken by trade in carrying out its assortment policy, such that the market will be saturated with a broad assortment of high quality goods. The extent to which the assortment of goods required by the consumers is satisfied is dependent upon the industrial enterprises and trade bases.

The work being performed by the wholesale trade elements is in need of radical

improvement in this regard. The wholesale trade must define the level for all commercial work: assortment policy, effectiveness in the maneuvering of marketable resources and an acceleration in their turnover. It bears mentioning that no noticeable changes took place in these areas during the past five-year period. The rates of growth in supplies surpassed sales by twofold. The predominant portion (up to 80 percent) was concentrated in retail trade and this restricts commodity maneuvering and it makes more burdensome and slows down the movement of goods.

When converting trade organizations over to operations under conditions imposed by the new economic mechanism, the organs of trade administration must ensure an organic link between the economic indicators for the work of a wholesale element and the final result of the entire branch -- fulfillment of the plan for retail trade and more complete satisfaction of the population's needs. The reorganization of the system for planning and administration must also be accelerated, with consideration being given to one important factor upon which the trade organizations must rely more heavily in carrying out their work -- increasing the role and responsibility of the soviets of peoples' deputies for accelerating socio-economic development and balancing the monetary income, expenditures of the population and commodity turnover with the marketable resources on their territories.

When organizing retail trade, the conditions required for improving services for the population and particularly for eliminating interruptions in the sale of sufficient goods must also be ensured. Last year's operational experience in a number of oblasts and rayons in connection with the expanded trade in fruit juices and non-alcoholic beverages serves to underscore the large reserves available in this area. The marketable resources available for developing trade in this direction are adequate.

Special attention must be given to organizing the trade in lumber and construction materials, the demand for which is constantly increasing. The task consists not only of expanding the sales of these goods substantially but also providing an entire complex of attendant services and particularly supplying construction materials in conformity with the needs of the population. The restrictions in this trade must be removed caused by shortages must be removed. Considerable improvements must be carried out in the trade in the waste products of industrial production in cities and villages. According to our computations, it should be possible to obtain up to 300 million additional rubles from the sale of these products this year.

Large reserves are available in the sphere of public catering. Over the past 5 years, the rates for its development were extremely inadequate (an average of approximately 3 percent annually). A maximum amount of attention must be concentrated here on those problems concerned with increasing the production of culinary and starchy products, fish and vegetable dishes and other dinner products, from raw materials which are available in sufficient amounts and on the use of industrial methods for preparing food. The quality of the food being served at public catering enterprises must be raised substantially. In some areas it will be necessary to change the operating regime of the enterprises. The network must be further expanded and this applies particularly to the fast food enterprises. All of this will promote the

development of commodity turnover and more efficient utilization of labor and material resources.

The results to be achieved from carrying out the plans as outlined will depend to a considerable degree upon the degree to which the trade and public catering workers succeed in mastering the new managerial methods. The organs of trade administration must ensure that the necessary work is carried out in connection with raising the skills of the workers, accelerating the reorientation of thinking and changing the approaches employed for controlling the economic processes and evaluating their results. The trade specialists must act in behalf of industry in an intelligent and high principled manner, they must defend the interests of the consumers and they must implement in an effective manner their own direct functions in providing services for the population.

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## FUELS

### RSFSR OFFICIAL REVIEWS RESULTS, UPCOMING PROBLEMS

Moscow TORFYANAYA PROMYSHLENNOST in Russian No 1, Jan 87 pp 2-4

[Article by B. N. Sokolov, First Deputy RSFSR Minister of the Fuel Industry: "The Second Year of the Five-Year Plan"; the first paragraph is the journal's introduction]

[Text] "...The current five-year plan has a special place in our 15-year Program, a key place. The main reserves of preparatory work and of resources will be established then. We are creating such reserves in the economy, and in management ; we are preparing such reserves regarding the dynamism in the country's political process and social policy and we are preparing them from the point of view of mastering new methods for the work of our party and our cadres--all these, then, will be telling on the results of our future 15-Year Program of work."--From M. S. Gorbachev's speech at a meeting of the CPSU Central Committee, 14 November 1986.

The first year of the 12th Five-Year Plan has been completed. Laboring collectives today are exactly analyzing work results and are searching for new reserves for speeding things up.

On the one hand, the work results of enterprises of the RSFSR Minister of Fuel Industry are being evaluated positively, and, on the other, serious analysis and measures for eliminating deficiencies, many of which have become chronic, are required.

In 1986 overall production volume for the ministry as a whole rose by 8.3 percent instead of the 5.7 percent called for by the plan, and the increase was obtained entirely through growth in labor productivity. Goals for the winning of peat for agriculture, for mining coal, for recovering oil, for importing timber, for producing lumber and goods for cultural, domestic-amenity and household purposes, and for increasing labor productivity and lowering prime costs for producing output were met.

The 1986 goals for the ministry's scientific-research and design organizations were coped with, and the plan for mastering the production of and introducing new equipment were met.

Meanwhile, the number of lagging enterprises continues to be large. None of the rural enterprises coped with the plan for sales of output, and a

fifth of them did not cope with the plan for labor-productivity growth and for reducing the prime cost of commodity output. Half of the ministry's associations and enterprises did not fulfill the commitments for deliveries of output and for contracts. Rostorf [Republic Industrial Association for the Winning of Peat of RSFSR Ministry of Fuel Industry], did not cope with the plan for recovering fuel peat because of late preparations for the season and organizational deficiencies. The plan for winning peat was not met by the Lammensko-Kurakinskoye enterprise of Ivanovo Peat Production Association, the Kerzhenets and Chistyy enterprises of the Gorkiy Peat Production Association, the Radovitskiy Mokh enterprise of the Shatura Peat Production Association and other peat enterprises. Mastery of capacity at newly built enterprises--the Dymnyy enterprise of the Kirov Peat Production Association and the Ulomskiy enterprise of Vologda Peat Production Association--still remains at an exceptionally low level.

The plan for producing briquettes was not met because of the unsatisfactory work of peat-briquetting plants--the Sitnikovo, Chernoramenskiy and Chistyy Bor plants of Gorkiy Peat Production Association, Yuzhskiy plant of Ivanovo Peat Production Association, Vishnevolotskiy plant of Kalinin Peat Production Association, Filiptsevskiy plant of Kostroma Peat Production Association, Ostrovtsy and OPOCHKA plants of Pskov Peat Production Association, Gorbunovo and Shirokorechenskiy plants of Sverdlovsk Peat Production Association, and Berendeyevo plant of Yaroslavskaya Peat Production Association.

Capital construction, both by the contract and the in-house method, deserves serious criticism.

A typical feature of the second year of the five-year plan is the conversion of the ministry's industry to operation under the new management terms. The preparatory stage of this conversion has been completed. The rights granted to enterprises and associations, as well as the positive experience of interdependent activities and of peat enterprises of the Belorussian SSR, should be used more widely under the new rules.

The goals of the five-year plan's second year are strenuous but realistic. The plan calls for further development of production, a rise in effectiveness by improving the utilization of production capacity and fixed capital, and the introduction of progressive equipment and technology. All the increase in production volume is to be obtained through labor-productivity growth.

Peat-winning in 1987 was set in the amount of 57.6 million tons, which is 9.5 percent above that for the first year of the five-year plan and, in so doing, peat won for agriculture will increase by 1.7 million tons, mainly in Vologda, Kostroma, Sverdlovsk, Tomsk and Kamchatka oblasts and Maritime Kray. The general line of the peat industry--the processing of peat--will be further developed. Its volume will be increased in all areas: the production of peat briquettes, peat bricks, peat fertilizers for various purposes and peat substrates. Not one enterprise should be without a plan for producing consumer goods.

Working collectives of RSFSR Ministry of Fuel Industry peat enterprises and associations should, by the 1987 season, insure the repair of 86,000 hectares



of productive area and 18,000 units of operating equipment, and prepare and put into operation 5,300 hectares of new peat fields.

The branch's machinebuilders must, by the 1987 season, insure that goals for the production of operating equipment and of spare parts for peat machinery are met.

The initiative of the Leningraders to require a new, progressive portion of the production capital to operate under a full workload on 2 or 3 shifts and to take obsolete equipment out of operation deserves the special attention of economic supervisors and of party and trade-union organizations. By the 1987 season, at least 1,180 equipment operators should be trained for support of two-shift operation for peat winning.

It is important to insure that the plan for the second year of the five-year plan is fulfilled at less cost, that is, to aggressively bring cost accounting to the departments, brigades and production sections. Each collective must find and use all production reserves more fully. This will enable more rapid conversion to the new and advantageous rules for wages and will stimulate labor-productivity growth.

The Chelyabinsk's initiative--to earmark about 10 percent of production construction to the building of housing and the erection of children's institutions--should be supported by peat-industry working collectives. Successes in the social sphere will enable not only the solution of economic problems but also the appearance of most important prerequisites for scientific and technical progress.

The improvement of peat-briquette production deserves more attention. The task of the production workers is to overhaul plants and to take active measures to supply them with high-quality raw materials, doing work that is of high quality and within standard periods for accomplishing the work. Scientific and design institute workers should implement their developments, jointly with plant workers, for improving peat-briquette production, for increasing the extent of automation, and for insuring high quality of briquette output.

Successes in developing the branch depend greatly upon timely and complete assimilation of capital investment and utilization of the scientific and technical potential.

In 1987, the RSFSR allocated 113 million rubles to peat-industry development, including 45.5 million for construction and installing work--14 and 18 percent more, respectively, than in 1986. Of the total amounts of capital investment, 29.2 million rubles, or 35.5 percent (versus 27.8 percent in 1986), will be earmarked for reconstruction and reequipping. Construction will be financed strictly within the standard periods for its duration.

Capacity for digging 650,000 tons of peat is to be put into operation, and the construction of a number of new peat and peat-briquetting enterprises and departments for producing peat-based products will be started. Funds allocated for housing construction will be almost doubled. All this will require that all the creative potential of the builders, for both contract and in-house construction personnel, be mobilized.

The construction of a number of peat enterprises is to be held in abeyance, in order to concentrate capital investment and to increase the share thereof devoted to the construction of facilities for the social sphere.

In accordance with 27th CPSU Congress decisions, the main levers for intensifying the national economy will be the acceleration of scientific and technical progress, the wide introduction of new equipment and technology and, based thereon, support for high production effectiveness and a rise in output quality. "Life itself puts the problems of quality on the agenda," said M. S. Gorbachev at the 14 November meeting of the CPSU Central Committee. "It puts it sharply, very sharply, at the center of restructuring."

A distinguishing feature of 1987 is the introduction of basically new operating processes, as well as an increase in the introduction of new equipment that is of fundamental importance to the industry.

For the first time, in a planned procedure measures are to be taken to introduce the selective method for gathering ground peat (100,000 tons) at Lengtorg [Leningrad Peat Production Association] enterprises and to increase introduction of the surface-layer method of winning lumpy peat by a set of MTK-16, MTK-22 and MTK-33 machines to 100,000 tons and recovery by the pneumatic method to 1.0 million tons.

During the 1987 season, milled peat won by highly integrated hopper machines must be brought up to 20 million tons, grubbing of the deposit's surface by the integrated mechanized method to 27,000 hectares, and intensive drying of upper fields to 1,750 hectares.

The realization of new directions requires that the machinebuilding capacity of peat enterprises and test plants be mobilized. Scientists and designers should speed up the improvement of rubber-tired trailers, UMPF-type hopper machines, and methods for accounting for the winning of ground peat at all stages.

Acceleration is the immediate task of USSR Minstroydormash [Ministry of Construction and Road Machine Building] plants. In 1987 peat-industry workers are expecting from the peat machinebuilding plants: from Velikoluk and Gorkiy plants, supplementary sets of equipment for the selective gathering of peat; from the Ivanovo plant, new rubber-tired cutter-loaders; from the Ryazan plant, large-scale output of machines for winning (MTK-16) and drying (MTK-22) lump peat; and from the Nelidovskiy plant, new types of machines for drying and grubbing deposits.

The industry's inventors and rationalizers face major tasks in regard to problems of mechanizing and automating production, saving materials and fuel-and-power resources, and raising the quality of the output produced.

The All-Union Seminar on Invention and Rationalization held at VDNKh SSSR [USSR Exposition of Achievements of the National Economy] showed what vast creative reserves and unused opportunities are at the disposal of laboring collectives.

Scientific workers face immense tasks in the second year of the five-year plan. Conversion to the new method for management and self-financing requires

an intensification of research in the area of peat-production economics, the development of cost accounting and a reduction in the industry's unprofitability. Realization of the general line--peat processing--should be strengthened by an acceleration of research about creating methods for more intense chemical and biochemical processing of peat that will produce new and effective products for agriculture, orchard cultivation and other spheres of the economy. Reduction of the industry's dependence on unfavorable weather requires radical improvement in the technology and in the creation of industrial methods for dewatering peat. Providing the public with fuel for municipal and household needs necessitates extremely an acceleration of solution of the problem of producing heating briquettes and briquettes made of other materials of biological origin.

The role of scientists in reequipping the industry, especially peat-briquette production, and increasing labor productivity and comprehensive mechanization of operations is great.

Only a combining of the efforts of all the working collectives of scientists, designers, production workers and builders will enable fulfillment of all the organizational and technical measures that will guarantee successful execution of plans for the second year of the five-year plan and a worthy greeting for the 70th Anniversary of the Great October.

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## EDUCATION

### YAGODIN INTERVIEWED ON VUZ CHANGES, REGULATIONS

Moscow NEDELYA in Russian No 2, Jan 87 pp 6-7

[Report on speech by Gennadiy Alekseyevich Yagodin, USSR minister of Higher and Secondary Specialized Education, corresponding member of the USSR Academy of Sciences, under the "NEDELYA Verbatim Account" rubric: "The Higher School: A Time of Changes"; verbatim account by Yelena Dikun; first two paragraphs are NEDELYA introduction]

[Text] At a meeting held on 6 January 1987, the CPSU Central Committee Politburo examined proposals related to carrying out the reorganization of higher and secondary specialized education, developed in accordance with the aims of the 27th CPSU Congress.

Progress in reorganizing the teaching and educational process in VUZ's and the measures being adopted for a substantial rise in the quality of training and use of specialists with higher education in the national economy were the subjects of a talk given at a meeting, recently held at the Central House of Literary Writers, of the capital's writers and teachers with Gennadiy Alekseyevich Yagodin, USSR minister of Higher and Secondary Specialized Education, corresponding member of the USSR Academy of Sciences. We are presenting the minister's speech and his answers to questions.

Reorganization of higher education is in progress today throughout the world. This is connected with the scientific-technical revolution, which increased the "quota" of intellect in the content of all vocations. In our country the special features of the reorganization stem from the fact that in the last few years the increase in the output of specialists has not been accompanied by the proper rise in the quality of their training. In addition, negative tendencies have begun to appear in the use of VUZ graduates, particularly engineers: a considerable number of them are engaged in work that does not require the skills that they obtained at the VUZ. Graduates of agricultural VUZ's are not assigned to work places. Despite the ever-increasing volumes of training, there is a teacher shortage. Of course, the concept of accelerated development of our society, advanced by the 27th Party Congress, requires the integration of education, science and production and intensification of the role of the human factor, which is related to the activity of the higher school.

The problem of correct utilization of specialists, their knowledge, love for their vocation and desire to work with full efficiency is very important.

For example, what sort of vocation is "senior engineer for registration"? Such a title really does exist. What sort of engineering functions does he have? There are a great many "senior engineers for registration" with higher education in all sectors. Having ceased to perform their true work, they have lost respect for themselves on the part of their associates. This situation has arisen in the country and can be changed only through major reorganization.

Today's work at all levels, from the worker to the specialist with the highest qualifications, requires continuity in education. In order for this process to be implemented, the foundation of knowledge must be laid: education is possible only on a very firm foundation. If a person does not know how to read or write--can he be educated? No. It is the same at a higher level. A knowledge of the basic laws of nature and the development of society should be established from the very beginning and should constitute the basis for developing the personality of the future specialist. Unfortunately, the secondary school does not at present provide this basis. When and for what reasons did the level of our educational system fall? As a professional educator, I feel that this happened to a great extent because of good intentions. In pursuit of a scientific-technical revolution, we tried to give schoolchildren and students an all-embracing volume of knowledge that was beyond them. As a result, the basic fundamental laws, without which it is impossible to progress, were lost in a stream of rapidly growing information. The students do not know the simple things.

The State Inspectorate recently tested the progress of students in the third year of a technical VUZ in Central Asia. They were set the task of adding simple fractions. Over ten percent admitted: "I cannot solve it...."

Continuous education cannot be developed if no foundation is laid. Therefore, the first task of the higher and secondary schools is the foundation. Creation of a firm foundation assumes the selection and sifting of the educational material. For example, in the course of their education, students now study 174 classic works of Marxism-Leninism. Estimate, how many do you personally know? I estimated--far from that many. Again, we are working in breadth, but we must work in depth, by increasing the firmness of the foundation. Optimization of the educational process should take place through selecting the most important educational material.

Independent work should become one of the bricks of the foundation. It has always made the greatest contribution to education and to the development of the individual. There is not a single great writer or scientist who "would not do it himself." One can learn to work for himself only by working independently. In the higher school, independent work is sacrificed to collective work: the collective seminar, the collective lecture, collective practical work and collective laboratory work. We are attempting to eliminate this bias. For this, it is not enough to make time available for independent work. We must know how to set a task and moreover, a developing task.

The higher school has another problem--the textbooks. Our textbook, as a rule, poses no problems requiring solutions. It sets forth some concept and provides material, and it must be read, understood and remembered, and reflected in this form. Learning, however, requires reflection in another form: in the form of solving a problem which presupposes thought, which requires a search and the effort of thinking. This aspect is lacking in our textbooks. It is not easy to correct this situation.

An important feature of reorganization lies in the fact that part of the instruction is combined with productive labor. Work should rest on learning and vice-versa--learning should intensify work. How is this done? When we pose the problem of integrating education with production and science, we think of doing it on a vocational basis, when the foundation of learning is already laid, that is, in the fourth-fifth years. Then the work will be both productive and vocational. Yet, work should be paid (otherwise "someone" will take the money) and sufficiently long--six months, a year. It should probably be organized differently at different educational institutions. This is because there are some conditions for physicians, others for teachers, still others for construction engineers and yet others for power engineers. From this there ensues one more important feature of the reorganization which we are planning: to get away from the desire to foresee all situations and to determine specific permissive or prohibitive measures for all cases. We are removing inflexible guardianship from the VUZ's and we say: "You are the scientists, the teachers, it is clear to you, you have a better knowledge of your specific problems--make a decision, but you bear the responsibility for your decisions!" An order was issued on expanding the rights of the VUZ's to reorganize the educational process and on developing initiative. This order permits the VUZ's to reduce the obligatory lecture-hall studies to 24-28 hours a week, and to devote the time freed as the result of the reduction to independent work for students in the form of course projects and work, papers and other creative assignments. This work is done under the guidance of a teacher and is calculated in his teaching load. Permission is given to shorten the length of the lectures to one academic hour and to reduce the number of disciplines studied by combining them. It is proposed that practical production work lasting up to one year be introduced in the senior courses, by combining instruction with productive labor at the work places, as technicians and engineers, laboring a full work day or a part-time work week.

Well and, of course, a very important problem is the material-technical base. Ours has been lagging behind, very seriously. It is difficult to put it right quickly. There must be funds, and large ones. At the present rate of development of the economic system, the necessary performance of the tasks facing the higher school and the material provision required for this can be reached only by the year 2000. We hope, however, that this will happen more quickly by virtue of the revolutionary reforms that education itself is introducing into science and vital processes.

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Gennadiy Alekseyevich Yagodin answered the questions of those attending.

[Question] The secondary and frequently the higher school give the pupils and students a certain amount of knowledge, but do not teach them to work and do not cultivate the ability to relate creatively to the grasp of this knowledge. The higher school does not teach the students--people entering into independent work--precisely, self-education and self-training. We do not even have textbooks, manuals or books on the problems of independent work. How does the higher school intend to carry out reorganization in this area?

[Answer] As I have already said, the foundation for reorganizing the higher school is laid at the preceding stage--in the secondary school. Many pessimistic moans and groans can be heard today in connection with the secondary school reform now being carried out. Would it be right, however, to expect immediate results? After all, the state of affairs in the secondary school is determined by the teaching staff: that very corps from which men have vanished, that very corps which was formed from graduating students who had failed at other institutes. The fact that we have now raised the wages for teachers and are improving the housing situation for them--all this, of course, will have its effect. These measures will not instantaneously change the qualitative composition of the teaching collective that we have right now. Therefore, in the secondary school the process of improving the skills of a teacher is very complex. Today specific and attainable goals must be achieved.

How can the new generation of teachers be formed? We have raised the grants at pedagogical VUZ's. That is, we are firmly holding the line--to give priority to the teacher. I am glad that young people who have completed military service are now choosing pedagogical institutes.

This is one problem, and the second is to release free time. The pupils and students need it--for independent work, for self-education. We are not providing it today. There is not enough time, the programs have increased. Which path should be taken? For example, the English way, when the young people are divided into three large groups by tests: humanities students, natural scientists, technicians? An English student in an institute of higher technical education is unfamiliar with literature. This struck me when I served in England. The students read neither Byron nor Shakespeare. Whoever has chosen a technical specialty will study only mathematics, physics and chemistry. It is terrible to follow this path. The multi-faceted nature of the human personality is the greatest contribution, and to raise, in advance, a one-sided person is a dangerous thing. Is this perhaps inevitable, and we will arrive at this all the same?.... If so, I should like it to be a little later!

Everything is the same in the higher school. It is only that it is simpler on a vocational basis, because the specialization has already been established in the higher school itself. We teach lawyers to be lawyers, technologists to be technologists and mathematicians to be mathematicians. We no longer give them literature and history in such volume--we wish only that they comprehend this aspect of human culture.

There can be no methodologies, no manuals to teach how one must work independently. We can only assist. As the English say, the proof of the pudding is in the eating.

[Question] Which problems arouse more concern in you--those connected with self-training or with self-instruction?

[Answer] But why "or"? Of course, self-training and self-instruction are not the same thing, because training deals with qualities and instruction--with learning and skill. However, just as one cannot oppose work and education (there is no work without education and vice-versa), so one cannot say--self-instruction or self-education. As soon as you begin to instruct yourself, you also begin to breed within yourself a love for work, and persistence.

[Question] The higher school is constantly asking the state for money. Could it not, since it has such tremendous creative and material potential, earn it itself? Is the self-supporting production [samookupayemost] of the higher school real?

[Answer] It depends on which higher school! The self-supporting production of pedagogical schools is not real. The self-supporting production of an engineering school--yes! We feed up others, too. I will give an example.

At the Chemical Technological Institute imeni D.I. Mendeleyev, as the result of the fundamental works of I.I. Kitaygorodskiy and N.M. Pavlushkin on the crystallization of glass, a new material was created--slag-glass-ceramic, with unique properties, possessing tremendous corrosion resistance and strength. By using the laws of crystallization, they invented cutting tools made of micro-lite. This work brought the state 50 million rubles in profits. Not one ruble of them found its way to the higher school--the system does not make provision for distributing the funds for this. So apparently, it is worth thinking about changing it.

There will certainly be sectors, however, that are not subject to self-supporting production. For example, the training of mathematicians and physics theoreticians.

[Question] The higher school--an extremely large sector--does not actually have its own scientific institute. The effectiveness of the scientific research institutes of the higher school is close to zero (G. Yagodin: "Agreed.") What are the plans for developing scientific research in the sphere of organizing the higher school?

[Answer] We are planning their development, but we see the main success of the higher school not in the generalization of psychological studies, but in the talent of the teacher. Each school and each VUZ must have its own innovators. How do we remember our own VUZ? Precisely, really for the teachers from whom we learned.

[Question] What are the new forms of teaching social sciences?



[Answer] The point lies not only in new forms. The main thing, to tell the truth, is not to retreat from crucial problems. They will be discussed, all the same, only in other lecture rooms....

Right now the higher school, in the study of social sciences, is paying a great deal of attention to abstracting the works of classic Marxist-Leninist writers. At the same time, they forget that an abstract is only a means to learning, and not the end. A general way of writing papers has also been adopted in the higher school. This does not merit being considered the main thing in studying social disciplines. Work must be done according to its essence, not according to form.

[Question] Will free visiting at lectures be introduced for the students, at least in the form of an experiment?

[Answer] No. We are persuaded that this must not be permitted. With free visitation, only 25 percent of the students reach the graduating class. True, in the next few years this figure will probably drop, because we are moving away from the rule which has existed up until now: if ten students are dismissed--one teacher is dismissed.

It should be said in this connection that I signed an order on eliminating the so-called conventional transfer from year to year if there is an academic liability. If by 1 September the student has maintained a "fail", he will not be in the following year.

Conversely, a benefit will be provided for very successful students in the senior years--they can transfer to individual training plans in accordance with their future work.

[Question] Is it perhaps worth converting to payment for tuition?

[Answer] Yes, we will go to paid tuition on a large scale, but not to obtain a diploma--to obtain additional knowledge in a certain field. I, for example, am interested in philosophy and want to attend a lecture course on some subject in the philosophy department, and am prepared to pay for this--by all means! This will be widely practiced in the higher school.

[Question] What is your attitude toward correspondence course instruction?

[Answer] This is a social function. Those who are working in a specialty, but could not obtain an "in-house student" education, must be permitted to obtain it by correspondence. The requirements for these people need not be different from those for "in-house students." Let them study as long as they please, provided that they prepare for the examinations thoroughly and do not take them merely in form.

[Question] In American universities the students often choose the program for themselves. Is it perhaps worthwhile for us to think about this?

[Answer] It is a question of the student himself choosing the subjects that particularly interest him. For this he should select the necessary number of units. This choice, however, is made according to the principle: whatever the student selects, he will still receive a basic knowledge foundation. This is the art of making up an academic program. We will certainly come to this, because this method mobilizes the personality.

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## DEMOGRAPHY

### FLUCTUATING PATTERNS IN SOVIET BIRTHS, MARRIAGES ILLUSTRATED

Moscow NEDELYA in Russian No 2, Jan 87 p 14

[Article by Viktor Perevedentsev, candidate of economic sciences: "The Third Child, a Wanted One"]

[Text] Having entered a new year, we, as always, look to the future. "What does the coming year have in store for us?" For the demographer, however, a year is too short a segment of time. The population of the country displays immense inertia, and therefore changes little in a year. It is more natural for the demographer to operate with generations, that is, segments of twenty-thirty years.

#### On the Crest

A constant alternation of high-population and low-population generations--demographic waves--is characteristic for us. Right now we find ourselves as if on the crest of this wave, at its highest point.

Here is some history. From 1944 to 1960 the number of births yearly grew steadily, next, up to 1969, it dropped and then--up to 1983--it rose. Here are the precise figures: in 1958-1960, on the average in a year, 5,282,000 children were born, in 1967--4,089,000 and in 1983-1985--5,384,000 children. The present peak in births, as we can see, is higher than the last one, although not by much--by less than two percent.

What will happen next? Will there be a slump similar to the one in the 1960's, or will the development be essentially different? If so, what will it be like? Knowledge of the past helps to predict the future.

Just why was there a huge, precipitous, "collapsing" drop in the number of births in the 1960's? This question is usually answered simply and unequivocally: because few children were born in the war years. By this time the children of the war years had become parents. If there are few parents, then there are, naturally, few children. The decrease in the number of births was the "echo of the war."

This is, of course, so. But this is by no means the whole truth. In reality, the effect of the war was added to the actual reduction in the birth rate,

that is, the decrease in the average number of children that a woman had. At the same time, the effect of the reduction in the birthrate was considerably stronger than the small number of parents.

Demographers have a very important indicator: the gross coefficient of reproduction of the population. This is the average number of girls born to women who lived up to fifty years. In the USSR this indicator changed in this way: in 1958-1959--1.36, in 1962-1963--1.27 and in 1968-1969--1.17 (unfortunately, you cannot manage without a fractional indicator here).

As we can see, it was the birthrate precisely that dropped here, and the number of children in the family became smaller. In the cities a transition to the primarily one or two-child family occurred. This process continued up to the end of the 1970's: in 1979-1980 the gross coefficient equaled only 1.06. The country passed from expanded reproduction of the population to constricted, that is, to a generation in which the children being born proved to be insufficient for quantitative replacement of the parental generation. The net coefficient of reproduction at this time was 0.07 less than the gross coefficient. This means that about seven percent of the girls did not live to parental age.

At the beginning of the 1980's a sudden change occurred: the actual birthrate rose by five-six percent. This was the consequence of an entire system of measures directed toward raising the birthrate and improving the rearing of the rising generation, outlined by the party and implemented in the 11th Five-Year Plan. This system included establishment of partially paid maternity leave until the child reached the age of one year, and unpaid--up to one-and-a-half years; payment of lump-sum grants at the birth of each child; a four-fold increase in grants for a child for single mothers and a number of other measures. The new demographic policy has proved to be effective. Practical experience has confirmed the fact that the birth rate can be controlled.

The situation with population reproduction remains quite complex, however. Somewhat expanded for the country as a whole, it is formed from a noticeably narrowed one in the European part of the country and in the Russian Federation and a strongly expanded one in Central Asia, Kazakhstan and Azerbaijan. The urban residents strongly "under-reproduce" themselves. In the demographic respect, the city lives at the expense of the village. The proportion of rural inhabitants in the population of the country is dropping greatly, however.

#### How Many Children Are Necessary.

The question immediately arises--for whom? The family or society? And when--on an average or at a given time?

Society needs at least a simple reproduction of the population, that is, the situation in which the number of the young generation is equal to the number of the parent generation. In this situation, if it continues long enough, the population will cease to grow and will age greatly. Constricted production is like the dying out of a population. Moderate expanded reproduction is the most advantageous from the economic standpoint.

To replace the parental generation under the present conditions there must be about 260 births for every 100 families who can have children. Why so many, and not 200, as is often thought? There are many reasons. Not all women are physiologically able to have children, fewer girls than boys are born, not all live to parental age....

If 60 families out of 100 had 3 children each, and 40 had 2 each, this would be sufficient for quantitative replacement of the parental generation.

It is precisely now, however, that there are not enough of this number.

If the birthrate remains unchanged, there will be a repetition of the same reduction in the number of births yearly as took place in the 1960's. This would have numerous many-sided and very unpleasant consequences for the country: acceleration of the aging of the population, decrease in labor resources for two decades, sexual disproportions at the marriage age, sharp fluctuations in the number of students....

While the minimum goal of the demographic policy under the present conditions may be preservation of simple reproduction for the country as a whole, the maximum goal is preservation of the present yearly number of births, in other words, elimination of the demographic waves. For this there must be a great rise in the birthrate.

Society needs, on the average, a three-child family. But do the parents need three children? The overwhelming majority of urban residents apparently do not. After all, they are the ones who increasingly determine the overall situation.

Numerous surveys made in several large cities show the same thing:

Practically all women want to have a child,

Only about half would like to have a second child,

Only three to four percent of the urban residents would like to have three and more children.

Why have the demographic tendencies changed so rapidly and sharply? Why is the birthrate now lower, by a factor of approximately two, than in the prewar years?

Needless to say, there are many reasons. The main ones are a change in the economic relations in the family and the sharp reduction in the death rate.

Until not long ago, the sons were the bread-winners for elderly parents. This function has now passed to social security: the principal source of livelihood for the aged is a pension. The family is not economically interested in the children.

Today's parents assume, not without reason, that even their only children will outlive them, the parents. Just fifty years ago, there could be no certainty of this. The dangers of being alone at the end of one's life are abating and being removed.

It is also a well-known fact that the birthrate falls with a rise in the education level, that the employment of women in national production does not further it, etc. All this leads to substantial changes in the systems of values; the relative value of children (in the plural) drops. The need for purposeful stimulation of the birthrate is appearing and growing.

#### Newlyweds Await Assistance

Only the young family can ensure demographic well-being for us.

In recent years, three-fourths of all children have been born to mothers up to the age of thirty; this proportion is rapidly growing. In the prewar years, about half of all children were born to these young mothers. The system of measures implemented to raise the birthrate that was implemented in the last five-year plan raised the birthrate noticeably only for young people; for middle-aged women the birthrate, as a rule, was unchanged, and for older ones--it continued to drop precipitously.

At the same time, the young family is experiencing difficult times. If one compares today's young family with that of only three decades ago, it becomes obvious that it now not only has few children, but also has conflicts and is unstable. It is not by chance that the number of divorces has exceeded one-third of the number of marriages in the same year (354 per 1000 marriages in 1984), and two-thirds of all divorces occur in families that have been in existence less than five years. In many cities the number of divorces noticeably exceeds half the number of marriages in the same year: in 1984, in Riga there were 550 divorces per 1000 marriages, in Donetsk--569 and in Odessa--even 592.

We know that the more divorces in a given location, the lower the birthrate. We also know that one of the main reasons for trouble in a young family is poor preparation of the young people for marriage and family life.

The objective living conditions for families starting out are not good enough, either. I think that something could be improved efficiently in this respect.

The most critical problem for the young family is housing. Judging from many surveys, over half of the newlyweds have no normal living conditions (married couples often live in different dormitories; frequently--with parents, without having a separate room; some take an apartment or a room).

I think that under today's conditions society could fully guarantee at least a room for the family starting out. There is already an average of over 14 meters of total living area per urban resident. This means, on the average, that two people get a one-room apartment and three--a two-room.... It is not much, of course, and far from the optimum, but after all, urban residents now have almost twice as much housing as thirty years ago. At the same time, however, many still do not have normal housing. One of the main reasons is the excess housing area formed in some families. There was, let us say, a "typical" two-child family. Then the son finished school and was sent somewhere to work, the

daughter married and the head of the family died. A single elderly woman was left in a two-three-room apartment. It is difficult for her to maintain such an apartment. A decision should be made as to how to return the housing excess to society. This means, to some extent--to newlyweds.

State loans to build housing and acquire furniture should also be made available to the family starting out. The "old people" give large and prolonged material assistance to many newlyweds. There are also many of them, however, who have no parents or whose parents are ill or on a pension. That is why, when possible, the living conditions of various young families must be smoothed out "at the start."

All right, I think that, in this period, when society needs children more than the family does, children should be paid for. The work of looking after children and of bringing them up, in the broadest sense of the words, is no less important for society than any other work. Like any other socially necessary work, it should be respected by society, and paid for. The conditions, level and quality of life of a three-child family should gradually, in all respects, become no worse than those of a one-child family.

Only the young people can solve the country's demographic problems. They, as we know however, fulfill more than just demographic functions. Under today's conditions, young people spend a great deal of time and energy for education. Over half of the low-population generation born in the second half of the 1960's are studying in VUZ's and secondary specialized educational institutions. Finally, the situation with respect to labor resources requires that young people work more. Thus, there should be an optimal combination of these three basic functions of young people--studies, work in the national economy and the birth and rearing of children.

12151

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## CIVIL AVIATION

### 'START' AUTOMATED ATC SYSTEM OPERATIONAL AT VOLGOGRAD

Moscow VOZDUSHNYY TRANSPORT in Russian 5 Feb 87 p 1

[Report by VOZDUSHNYY TRANSPORT Volgograd correspondent N. Khudobina under the rubric "Fact and Commentary": "One More Start for the 'Start'"]

[Text] Volgograd has changed over to air traffic control aided by the "Start" automated UVD [ATC] system.

They have been waiting for this event for a long time. Automated facilities will make it possible to increase the airport's traffic capacity, facilitate regular aircraft departures and arrivals, and contribute to air safety. Working conditions for the air traffic controllers will be improved.

It had been planned to put the AS UVD [automated ATC system] into operation at the end of last year. But at first the construction workers delayed in turning the project over for operation, and then it took a long time to resolve the power supply problems--there wasn't enough electric power cable. Before making the decision to change over to the new automated ATC system, its reliability must be fully guaranteed. For this reason, "Start" was operated for some time without going on the air. Shortcomings were identified and corrected in the process of preliminary operation.

At the same time, traffic service personnel of the Volgograd Aviation Enterprise underwent a probationary period at the new work stations and adapted themselves to the new conditions. After all, there is no special simulator for this automated system in the sector, and they have to familiarize themselves with it and make use of all opportunities for high-quality retraining of the specialists.

The service's collective temporarily changed from five-shift to four-shift operations, and the shift that was "freed" familiarized itself with "Start." In this way, all the traffic service specialists acquired their first necessary skills. The collective had difficulties connected with the changeover to the automated ATC system, and quite a few of them. They were not able to avoid overtime work at the old consoles with which they were familiar, for example. But in spite of this, the collective coped with the task successfully, providing for a high level of air traffic safety in a short period of time.



The new automated ATC system required restructuring of airspace, which is necessary to make maximum use of all the capabilities of "Start." Previously, for example, practically every second aircraft entering the airfield zone made a circle. There is no such need now. The new airspace structure is more economical. Aircraft consume less fuel over the airfield and spend less time in the air. But it was also necessary to become accustomed to the new airspace "pattern." The process of adaptation has been completed. The "Start" automated ATC system has become operational.

8936

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## CIVIL AVIATION

### VNUKOVU FUELING SYSTEM FOUND INADEQUATE, UNSAFE

MOSCOW VOZDUSHNYY TRANSPORT in Russian 18 Dec 86 p 3

[Article by Ye. Kukhterin, chief of a department of the GPI i NII GA "Aeroprojekt" [the "Aeroprojekt" State Planning and Surveying and Scientific Research Institute, Ministry of Civil Aviation] and candidate of technical sciences, and S. Popov, junior research worker, under the rubric "Scientific and Technical Progress Dictates": "The Alarm Signal Has Not Been Heard Yet"]

[Text] All the services of one of the country's largest airports, Vnukovo, operate with efficiency and coordination, providing transportation every day for many thousands of passengers. It is difficult to visualize the consequences for the Vnukovo Production Association if this giant were to shut down. But in the meantime there is every ground for expecting this from minute to minute.

Commissions made up of specialists from "Aeroprojekt" and Vnukovo Airport who have inspected the facilities for the airport's aviation fuel supply system came to the conclusion that many of them are in an emergency status and do not have the necessary standby equipment accessories and power supply. At present, the fuel is being dispensed to fuel trucks through four filling points at the front of the apron. A piping system built with the airport's own resources to the filling points from depot No 1 has only one line, and it was laid out at one time with significant deviations from engineering design standards and was not adequately insulated from corrosion. In addition, a standby line was not installed.

"There is no guarantee of the reliability of the pipeline laid between fuel and lubricants depots No 1 and No 2, either," reports V. Alekhovich, an engineer for the Vnukovo Production Associations Fuel and Lubricants Service. "This one has been in use for over 20 years. It has significant rust damage, and because of this it has been out of service and repaired many times."

It is not necessary to explain that the operation of the entire airport is paralyzed when a pipeline is out of service. It is not worth placing one's hopes on fuel trucks to ensure uninterrupted delivery of fuel directly from depots No 1 and No 2 if the pipelines break down, either. After all, in this case, it will be required to significantly increase the number of fuel trucks and filling points at the depots to provide for normal servicing of aircraft,

and that narrow road connecting the depots with the apron will simply be in no condition to provide for rapid, efficient vehicle traffic. Especially if there is an emergency in the summer period of heaviest traffic.

The inspections also showed that both pumping stations--the one built with the airport's own resources and the old one--are in an emergency condition, and the automated pumping control facilities still do not have reliable electric communication. All this is a consequence of the fact that overall development of fuel and lubricants facilities at Vnukovo Airport has not been carried out over the past 20 years.

The results of these inspections were recorded in official documents by the commissions and brought to the airport management's attention, although no practical steps have been taken on them.

Today the situation does not allow us to wait. Under the conditions that have taken shape, comprehensive renovation of the aviation fueling system is needed in the shortest possible period of time, specifically over the next 1.5 to 2 years, to include in the process: construction of standby pipelines and a pumping station, expansion of the standby facilities of fuel and lubricants depot No 1, and most important, construction of a system for centralized refueling of aircraft. After all, Vnukovo Airport is the country's only large airport which has not been provided with modern aircraft refueling facilities. Another reason for building a TsZS [centralized refueling system] without delay is the ever increasing number of Il-86 flights. This widebodied airliner is refueled by several TZ-22 type fuel trucks, which reduces efficiency considerably and complicates maintenance of the aircraft. Use of the larger-capacity TZ-60 fuel trucks at Vnukovo has been made difficult because of their large size and the limited apron area.

Building a centralized aircraft refueling system is a long process requiring significant monetary expenditures, of course, but it cannot be put off.

Let us note that there is no necessity of purchasing expensive imported equipment to the full extent for building a centralized refueling system at Vnukovo Airport at this time. Experience in building and operating domestic centralized aircraft refueling systems makes it possible now to count on successful utilization of equipment manufactured at plants inside the country. The worst bottleneck here now is the refueling units, the series output of which is actually expected in 1988-1989. But as a last resort, they may be purchased in limited quantity abroad at first.

One point is clear today: in order not to disrupt the existing regularity of operations at the airport, renovation of the aviation fueling system must be begun with construction of backup standby pipelines linking fuel and lubricants depots No 1 and No 2 with each other and with the fuel truck filling point on the apron, facilities for a new pumping station, and servicing tanks for the centralized refueling system. Only decisions on all the matters discussed must be made at once!

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## CIVIL AVIATION

### OFFICIAL ON 'KOMETA' AIRLINE RESERVATION, TICKETING SYSTEM

Moscow TRUD in Russian 9 Jan 87 p 4

[Interview with Viktor Mikhaylovich Fursov, deputy chief of the Aviation Work and Transport Operations Main Administration of the USSR Ministry of Civil Aviation, by TRUD correspondent S. Mostovshchikov: "Flight Under a New Program"; first paragraph is TRUD introduction]

[Text] A "Comprehensive Special-Purpose Program to Improve Transportation Organization and Raise the Level of Passenger Service on the Ground and in the Air" has been developed by the Ministry of Civil Aviation and its implementation was begun this year. V. Fursov, deputy chief of the ministry's Aviation Work and Transport Operations Main Administration, tells TRUD correspondent S. Mostovshchikov about this.

[Question] Viktor Mikhaylovich, before climbing above the clouds, an Aeroflot passenger has to overcome the power of earth's gravity, which is noticeably intensified at the ticket counters. It is not enough that the lines to them have become unbearably long. But there is no guarantee that you will receive a ticket for the flight needed after standing for 2 or 3 hours...

[Answer] You are right. This is one of the worst problems. The "Sirena-2" ticket sales and reservation system which is now in operation no longer is completely adequate.

Development has now begun on a new more advanced system which we have called the "Kometa." A center for it will be established in Rostov-on-Don. With the aid of the "Kometa," for example, you will be able to reserve a seat for yourself a year before the departure. I think this service will become convenient for those residents of remote areas of the country who know the time for their vacation in advance.

If there prove to be no tickets for the flight that you need, the "Kometa" will put you in a sequence, and your surname will appear on a so-called "waiting list" in the EVM [computer] memory. If a seat suddenly becomes available on the aircraft for some reason, the computer will then assign this seat to you in accordance with the sequence.

By the way, it is still too early to talk about all the advantages of the "Kometa." Development of it will be concluded only by 1990.

[Question] Yes, but the "Sirena" is already yesterday's system, and you will begin installing the "Kometa" only after 4 years. Won't it turn out that it will also be obsolete by that time?

[Answer] When development of the "Kometa" is completed it will not be inferior to any similar ticket sales and reservation systems in the world, according to our calculations. But this does not mean that we must sit with our arms folded until that time. "Sirena," you understand, is poor not so much because it is not modern, but because its centers are in operation in only 10 cities in the country at present. For this reason, the network of centers for the "Sirena-2" system will be expanded in the near future. They will be established in Simferopol, Sochi, Tbilisi, Tashkent, Alma-Ata, and Tyumen... Future re-equipment of them for the "Kometa" will not require large expenditures and will take place quite rapidly.

Incidentally, there is another innovation which I think passengers will be evaluating soon: tickets will be sold 30 days before the departure, not 15 days.

[Question] And even if you have the most advanced systems, it is unlikely that they will be able to meet the demands of all those who want...

[Answer] If you have in mind the fact that the demand for transportation is not being met at present, I am compelled to agree with you. There are resources here.

With the fleet of aircraft and stocks of fuel we have now, we can significantly increase transportation efficiency. Here is an example. Everyone is aware that there are seasons when it seems the entire country is rushing for a flight. And sometimes it is calm on the air routes. So isn't it more sensible to lower ticket prices during such seasons that are "not in demand?" Then persons will begin thinking about the best time for them to leave on a flight. The passenger flow will be balanced out. This proposal is now being discussed.

And we are not ruling out of our plans the possibility of a quick substitution of the type of aircraft departing on a flight, in relation to the demand for seats. When there are many who want a flight, we will send a large airliner, and if less passengers are gathered, a somewhat smaller aircraft will fly. Operational changes in the flight route also will be expedient.

[Question] The path to the sky for a passenger begins at the airports. But they now leave much to be desired: the constant crush and crowding...

[Answer] And you know why? The overall area of the country's airports is nearly half what civil aviation needs at present. And this is the cause of the hubbub. And this problem is becoming more critical from year to year. After all, the number of passengers is continuously increasing. This year, for example, the Il-86 will fly to Sverdlovsk and Kemerovo, and new aircraft--

the Il-96, Tu-204, and Il-114--are being readied for operation. Imagine how the burden for airports will be increased. So there is one solution--build new, more spacious complexes. Funds are needed for this, obviously, and in large sums. But unfortunately, they are not always sufficient.

But the problem must be resolved, and our program provides for such measures. In Moscow, for example, a large air terminal will be built at the "Domodedovskaya" Station, from where passengers will be sent by direct route to the Domodedovo Airport, and possibly to Vnukovo and Bykovo as well.

During the five-year plan, 11 new airport buildings will be erected in Baku, Minsk, Ashkhabad, Karaganda, Syktyvkar, Magadan, Vilnius, Krasnodar, Ivanovo, Chita and Petropavlovsk-Kamchatskiy. Another 25 will be built in the future. Lightweight pavilions of modular construction will make it possible to expand airports in operation. They will be built in Kemerovo and Novokuznetsk in 1987.

[Question] Viktor Mikhaylovich, you recall that Aeroflot treated its passengers to nourishing lunches, not to mention candy, at the dawn of civil jet aviation. Now they offer food only on flights which last more than 4 hours...

[Answer] But at the same time, it is wrong to think that the meal was part of the cost of the tickets. It appears in all our documents as free of charge. Evidently Aeroflot was attracting passengers this way previously. But now even without advertising we are not completely coping with the traffic volume.

Nevertheless, we are thinking about organizing a meal for those flights which take less than 4 hours as well. Something like a buffet service will be organized on those aircraft.

We still have a great many unresolved problems and shortcomings, and they give rise to justifiable criticism. We are gratefully accepting all suggestions aimed at improving Aeroflot's performance. After all, whatever our program may be, it probably cannot take everything into account. So we await your observations, comments and suggestions, TRUD readers.

8936

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## MOTOR VEHICLES, HIGHWAYS

### ALMA-ATA TRUCK TRAILER QUALITY SCORED

Alma-Ata AVTOMOBILNYY TRANSPORT KAZAKHSTANA in Russian No 12, Dec 86  
pp 10-12

[Article by Staff Correspondent A. Bokov under the heading: "Organization of Shipments"; "Trailers--Our Main Reserve": "Let's Have a Talk About Quality": "The Times Demand Restructuring, But What About ARO-2?"; first paragraph is source introduction]

[Text] "The party congress has made the problem of quality a nationwide task" (from the report of CPSU Central Committee General Secretary M.S. Gorbachev at the June 1986 CPSU Central Committee Plenum).

Which of us does not remember from long ago the lines from the children's poem by Mayakovskiy: "The tiny son came up to his father and asked, 'Just what is good and what is bad?'" As we know, the father replied in easily understood terms and explained to his son the difference between the former and the latter, using simple everyday examples. Unfortunately, for grown-ups, in certain instances finding this difference--to put it in scientific language, "the criterion of truth in analyzing certain phenomena in reality"--is sometimes quite complicated. After all, here a great deal depends upon one's point of reference, and they crop up in various ways--right down to direct opposites.

What are we talking about? We shall not arouse the readers' curiosity any further: our conversation today deals with the quality of the trailers produced by the Alma-Ata Industrial Automotive Repair Association No 2 [ARO-2].

"But what, strictly speaking, is the matter? Why are you so interested in precisely this topic?" the association's party committee secretary, A. Lukin, tersely inquired of me, upon learning of the purpose of the visit.

In reality, what is the matter? Perhaps it lies in the fact that a good deal of hard-to-get raw materials and metals and a lot of manpower, monetary resources and work time continually go to the manufacture of trailers--but the complaints and criticism of their quality never seem to run out? Or, finally, in the fact that each of us has a right to ask--and the editors have already taken advantage of this right more than once--are things being run efficiently in this sector, as the times demand?

"Our trailers are, unquestionably, good ones," declares N. Marov, the association's chief engineer. "The latest of them, the 8550 model, is just as good as similar models from the FRG in terms of load capacity, whereas at the same time they are not as heavy. In 1985 this modification was certified at the highest category of quality by higher authorities in the republic. People come from Georgia, Kirgiziya and the Baltic to ask for our trailers! And what a demand for them there is in Kazakhstan! Of course we have our weak points. But there are objective reasons for that. Moreover, we are working to overcome our shortcomings... Incidentally, there was talk that our trailers would be nominated for a prestigious prize..."

But you see there is an entirely different opinion on the part of the users: "In terms of quality, the Alma-Ata trailers are very poor! It's just that the need for them is so great that the demand is high," is what I heard from V. Rudenko, the garage supervisor at the Peshkovskiy ATEP [Motor Transport Dispatching Enterprise] at Kustanay Motor Freight Administration No 1. "By the way, why should I tell you this without offering any proof," he continued. "Let's go out into the territory right now, and you'll learn for yourself!"

It was at the peak of the recent harvest period--at a time when every piece of rolling stock should have been, as they say, on deck, present for duty. And that is why the lot set aside for parking the equipment was absolutely empty. But over here a brand new trailer was displayed in full view. And why was it not presently at the harvest?

"It's been sitting there for a week already," explained Viktor Mikhailovich, anticipating my question. "The seams on the floor of the platform have to be welded shut; the metal plates are only fastened together. Then it still needs metal corner plates to stabilize the sides--or else the trailer would fall apart before your eyes if it were loaded. There's another week's work here if one really works at it," he added. "But even after that the trailer won't be able to budge, because it is clearly incomplete. There is no brake valve, nor any tail lights. They, allegedly, should arrive later; but when they will get here no one knows. What else? The design of the trailer hitch is still poor, and the longitudinal side members on the platform are puny. We've had instances when during unloading, the weight of the body had bent the supports in different directions."

I'll tell you briefly about the conversation in the office of the association's chief engineer. At that time a kind of "emergency meeting" was being held there, but he nevertheless politely agreed to give me a few minutes: "Don't you see?" declared Nikolay Pavlovich concerning the above, "In most cases, all of these problems are caused by improper operation of the equipment. If you'll take a look in the registration certificate, you'll see it is designed for hauling loads on first and second-class roads. But the trailers are quite often utilized in the most unbelievable conditions--right down to completely impassable roads, as I personally witnessed in Emba. And the kind of loads they haul on them!" he continued. "According to the certificate, I repeat, 10 tons is allowable. And more than once our workers have checked on the operation of their trailers at the gates of the reinforced concrete products plant and out on the roads themselves, with GAI



[State Automobile Inspection] officials present, often came to the conclusion that they are hauling from 12 to 15 tons in them. And look, our product was not designed for such operating conditions. It's not surprising that they don't hold up in such instances."

What can you say? It's all logical. It would appear that one could not object to this. In other words, the trailers are all right anyway--it's the operators who are to blame! Although... If you think a little and approach the problem from another aspect--should not any article possess a certain amount of durability in reserve?

In the final analysis that's a question for the designers, who should anticipate that difficult situations will arise for their offspring; and evidently they have given the subject quite a bit of thought.

The problem of quality is a complex problem. Its successful solution is the sum of a large number of factors. Its real properties have not only economic but also moral roots; therefore, we will not make a hasty conclusion.

I gleaned a great deal of information from the conversation with the chief designer at ARO-2, V. Cheremisin. I learned the difficult history of the creation of the trailers at the ARO. You see, their manufacture was organized with only the resources of the branch. There were no centralized deliveries whatsoever, neither for parts nor raw materials. They began here with ZIL- [Likhachev Motor Works] type side members, and then used dump-truck beds. They even produced semi-trailers. And then they switched to trailers with greater carrying capacity, to the "KamAZ" [Kama Motor Works] type.

Yes, the collective has accomplished a great deal. They have mastered, for example, a great many industrial processes which they previously did not know of. At the association they taught themselves to make axles and turnplates; they learned to make springs, hydraulic lifts, brake blocks, and many, many other things. And they learned to do them quite well, stresses my interlocutor. And once again I hear, that as trailers go, our trailers are pretty good ones.

What can one say? No one, as they say, can take the successes and achievements away from the collective. But the consumers still have a problem with the quality. And so here we should begin to talk of something else.

Here, incidentally, is another current example. I had another conversation in Kustanay with the Chief of Motor Vehicle Column 2579, A. Zadorozhnyy. Some of their trailers are standing idle because of a breakdown in the wheel hubs. For some reason a part from a ZIL-164 truck was used for the hubs, and no one has produced that equipment for a long time. Where can one get spare parts?

"That is true," Vladimir Pavlovich reluctantly agreed. "You can't get spare parts anywhere. If something happens to the hub, the trailer can't be used. Here one has to find a way out of the situation. The question is being resolved at the ministry as well, with the help of UMTS [Material-Technical Supply Administration]. But how long can they take to resolve it? The

KamAZ-type trailers have been produced for three years now, and for three years they've been rolling down the republic's roads with hubs that are unique in terms of their technical antiquity.

"The entire fact of the matter is"-- Cheremisin continues to hold the line in "defense" of the innocence of his collective--"that they are still supplying us these obsolete components from the city of Kanash."

If you put it that way, then it naturally follows that the plant workers themselves cannot and could not do anything; therefore, someone else altogether must be the guilty party.

Indeed, many assembled parts for the trailers arrive from the most varied cities of the Union. Only 60 percent of the production association's quota for supplies and raw materials is provided from ministry funds. The remainder is acquired, somehow and somewhere, entirely by the collective itself. It happens that the entire management of ARO-2, right down to the general director, gets involved in "knocking out" a certain component, or the metal, and not just the supply specialists. Incidentally, we will not attribute these words to the chief designer. Another interlocutor, deputy chief engineer B. Masangaliyev, had already revealed this inadvertently.

And once again, behind these remarks one gets a fleeting glimpse of what's been understated: if complexities with quality arise, then the reason is that there are objective difficulties, with which everyone is heroically struggling.

"Quality of production in no way depends upon us," I was assured in my conversation with V. Peruyeva, chief of the procurement section. "The metal cutters and press operators who work for us work with what they've got. To be specific, we need three-millimeter sheet metal, but the Karaganda Metallurgical Combine provides it in 2.5 and 2.8-mm sheets. And we should be thankful for that too. After all, we have to fulfill the plan."

I'd like to stress one detail: of all the people whom I managed to meet at ARO-2, not one had anything to say about their own production reserves, or about their own capabilities in the matter of raising production quality--everyone saw things apart from the plant, the shop, the brigade, and ultimately their own workplace. Is this not amazing? Incidentally, not that long ago, all motor vehicle enterprises in Kustanay Oblast received a telephonogram about a DTP [Highway Transport Incident] on the road involving a new Alma-Ata trailer, caused by failure of ball-bearings in a wheel hub. It was only due to dumb luck that no one was hurt in the incident. Who should bear responsibility? Assembly of hubs is carried out in the assembly shop of V. Buryakov's brigade.

Welding operations. Operators have made an exceptional number of complaints on this subject, as is well known. We managed to visit this shop twice. I'd like to recount here my conversation with the leader of one of the brigades, N. Bekarikov. His predecessor was removed from this position because of the poor quality of his work. This was in April. But already in August the brigade was once again deprived of 30 percent of its bonuses because the seams in the floor of the trailer are not smoothed out. What's the matter?

It turns out that the reason is simple. In order to smooth out the seams, the welder must lay aside the electrode holder and brush, and pick up a bevel-edged finishing tool. The operation takes up a lot of time, and costs 7-9 kopecks in all per running meter. If one welds without smoothing out the seams, instead of welding a 10-meter seam one can squeeze out 13 in the same time. And that's what determines one's wages is it not?

"Low-quality work is quite often due to the fact," says the brigadier, avoiding the question, "that the quality of the electrodes is poor. And also because quite often at the beginning of the month it is slow going but later on there's a rush to finish. You see at present in essence we have nothing to work with: there are no front pieces, no brackets, and no number 8 channel bars; but in 10 or 15 days there will be an all-out effort. Then all you hear is 'Come on, come on!' And if you don't complete the task, you'll get nothing. Even though, of course, quality is everyone's responsibility. And we try not to allow defective work..."

The brigadier was a sly one. While departing the shop along with the senior foreman, we could not help noticing that the seams on the trailer beds which were ready for transfer to the next section were not welded completely; and although they were cleaned up, there were hollow spots--painted black. Yes, in order to do genuine quality work, something else is still required.

We called the brigadier over to us and pointed out these "hollows." He had nothing to say, and only pulled his welder's mask down over his eyes. But no words were needed. Here the brigadier is on the job, and according to the calendar the period of all-out effort is still far off. And then what will happen when the all-out effort erupts? And by the way, why have they gotten so used to shturmovshchina here?

Let's address this question to Deputy Director N. Bakinbayev: "It's hard to explain why," he admitted sadly. "It's only that on the whole all materials actually arrive after the first 10 days of the month. The suppliers, I suppose, work in spurts. How else could it be?"

However the small scene which was played out here in the office right after he spoke somehow contradicted him: "Look, it's been--I don't know how many days--since we've been able to haul metal from the supply base!" says one of his subordinates to him, bursting into the office. "Where can we get the trucks?" To this exasperated cry just one thing should be added: the supply specialists have 50 vehicles assigned to them. Yes, but when they are needed there are none to send for the metal.

Possibilities for raising the association's production quality exist. Our conversation with OTK [Technical Inspection Department] Deputy Chief Ye. Rakishev gave indications in this respect. He readily informed that 68 workers have a personal claim in production; that since the initial showing, 618 have been replaced--that is, 83 percent of the workers; and that quality control inspections and raids are conducted frequently. However, to my surprise he did not have a thing to say about the weak points of the trailers, nor about "bottlenecks" in questions of quality. We were forced to find about about these through examination of the record. In one of them,

the one for August, incidentally, it is written that in a ten-day period the OTK was to set up a "Quality Screen" in order to ensure wide publicity to the quality campaign. I asked Ye. Rakishev whether at least that had been done. No, of course not. I already knew that there was no current information whatsoever devoted to these questions in the shops. And this is what the association's party committee and its secretary ought to be paying attention to, and not be wondering why all of a sudden the subject of quality is brought up. Everyone knows very well why, including the enterprise's chief engineer, N. Marov. We shall cite still another excerpt from the official records of the Quality Days: "Comrades!" said Nikolay Pavlovich during Quality Days, "The quality of manufacture of our trailers is very low. While investigating a complaint I visited the consumers in the city of Taldy-Kurgan, where it turned out that we were to blame that defective products had been sent out, namely: that the floors of the trailers are not welded to the framework; the metal is not suitable for flooring; and the sides of the body are not strong enough--as a result of which, the shaft bows--and, the quality of the hydraulic lifters is low as well. This testifies to the fact that shop supervisors and their technical experts are not monitoring product quality; they can see that manufacturing technology is being violated, but the OTK permits release of defective items anyway."

And so, are the trailers made by ARO-2 good or bad? One would think that in the official record Nikolay Pavlovich answered this question more truthfully. Then how can one explain the fact that during the meeting he said something else? It turns out that there are two moralities and two kinds of openness: one for a narrow circle; the other for everyone else.

Yes, but you see, there is only one morality for us all.

In the given situation, in particular, it follows that the administrators of this ARO-2 have a moral responsibility not to close their eyes to the vital requirements the changes demand, but to readjust and meet them halfway.

There are, we repeat, opportunities to do so. One cannot say that they cannot be implemented at all. Measures are being worked out on this question, and orders are being issued on instances of shoddy work. However, as yet there is no detailed and purposeful program of actions by year. The collective is not actually being mobilized to solve the key problems.

Thus, the technical control department at ARO-2 is not yet working effectively enough. And this, in particular, is because of the fact that instead of 38 persons only 31 are working there. Moreover, of these only two--the chief of the OTK and his deputy--have higher engineering education.

Thus, somehow this unit must be beefed up.

"But what is to be done?" Ye. Rakishev asks in turn in this connection; Rakishev, whom we already know, is deputy chief of the OTK. "Specialists do not come to us."

Right. Nor do they come to the design bureau, on whose work the future of the Alma Ata trailers depends so heavily. Here 23 designers are at work, instead of the 30 authorized.

However, it is known that for almost a year now the branch has been operating under the new management conditions, under which enterprises are given greater rights. Specifically, by virtue of savings in the wage fund they already have the capability to provide supplementary and additional payments to the wages of engineering-technical workers, in order to eliminate the "shortage" in personnel in "tight" places. Or perhaps all of this has not yet reached the association?

At this time the design bureau already has to solve problems which are much more complicated than they've ever solved before. Previous modifications to the trailers "came to light" after approval by their higher authorities: the Kazakh SSR Ministry of Motor Transport, the republic GAI, and the republic Committee on Standards. The next model of the trailer, on which the design bureau has already begun to work--taking into consideration the comments of the operators--must be certified at the Union level, in Moscow. Naturally, the demands for quality of the future trailer will grow.

I was curious as to how V. Cheremisin felt about this:

"If we were to proceed from the present requirements on the products, our trailer would simply not pass, for a number of reasons," admits Vladimir Pavlovich. "It would not pass in terms of weight; nor in terms of the metal which we are sent... But you see, if the appropriate authorities would provide us with the necessary funds..."

To this I'd like to add, that it will not pass certification in terms of the quality of the work itself, if it is manufactured the same as it is at the present time.

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## MOTOR VEHICLES, HIGHWAYS

### MOTOR VEHICLE SPARE PARTS SUPPLY PROBLEMS EXAMINED

Moscow ZA RULEM in Russian No 1, Jan 87 pp 14-15

[Article by V. Sementovskiy, chief, Spare Parts Supply and Distribution Department, AvtoZAZ Association: "Why Aren't There Any Spare Parts When They Do Exist?"]

[Text] The atmosphere created by the party congress has caused many people to reinterpret things. It's becoming more and more obvious that the old slogan so revered by some administrators--"He who wants to do something, finds the means; he who doesn't, looks for excuses"--today should clearly be qualified. For too long people thought that any and all means were suitable as long as they led to the goal--but this has cost society dearly.

Let's ask ourselves a few questions, and let's try to find the answers to them together and determine the means for the most effective--and relatively unburdensome to society--solution to an old problem.

Any auto enthusiast, even one who owns a brand new automobile, needs spare parts. The uncertainty brought on by tales of the "worldly wise" and reinforced by the unbelievable prices on the black market, have led the auto enthusiast from the very first to put away for a rainy day--just in case, anything that he can get his hands on. Simultaneously, from time to time we read with hope and approval about the significant increase in the production of spare parts for passenger cars, which is now taking place.

And then a breakdown occurs and, of course, it's not the part which you have on hand. Presently, when the value of the needed parts equals the ability to use one's car, the figures for the overall increase in the volume of spare parts production may not seem all that optimistic to a person, and he appeals to those responsible for production with the legitimate questions, "Why?" and "Until when?" And the people who know reliably inform him how much spare parts production volume has grown and continues to grow--and that the spare part being sought, it turns out, has not been in short supply for some time, since consumer orders for it are always fully satisfied.

Don't be too quick to stigmatize the next bureaucrat you see. Without having to defend the honor of the regiment, I can state with full authority, that for the majority of the letters sent to our AvtoZAS [Zaporozhye Order of the Labor Red Banner "Kommunar" Auto Works] Association, such an answer would be the proper one.

It's true, a great deal has been done. Judge for yourself. Several years ago demand for spare parts was not being met (for a range of spare parts for autos in the Zaporozhets series) for more than 100 items. This included a significant number of parts for the power train and the body, spark plugs, electric instrument lights, many ball bearings, and rubber articles. Presently 28 items in production are in short supply, whereas the supply of the majority of them has increased several times. The day is not far off when the plants will be able to cope with these parts as well.

All of this is true; but it is true for the producer. There is also that which is true for the consumer--that is, the automobile owners. After all, according to the logic of things, if out of 1,360 separate items which make up the list of spare parts only 28 plants are unable to fill the orders, it follows that the auto enthusiast can acquire the remaining 1,332 without the slightest difficulty. But although the number of letters has declined significantly, analysis of the letters convinces us that the average auto enthusiast in the localities has barely felt the change in the situation for the better.

But why are two seemingly mutually-exclusive truths lined up side-by-side? How can they be changed into one? How can we achieve the state in which every part which has disappeared from the shortage list, if one can put it in those terms, of production--would also disappear from the consumer shortage list?

The times demand that we take leave of stereotyped thinking, and seek new approaches to solving the old problems. Let's take a look at the problem from these positions.

Up to now the predominant approach to the question of how to improve the supply of spare parts is a vivid example of the extensive method. Its all very simple. There aren't enough spare parts? That means we must make more, and still more. How many? Well, that's enough for now... But then it must be determined who will bear responsibility for creating such an abundance and how to make sure that this very abundance does not become ruinous for the state. After all, production and sale of spare parts cannot be an end in themselves. The expenditures for metal, energy, and labor are expedient only insofar as they help satisfy social needs.

Ten years ago the AvtoZAS and AvtoVAZ [Volga Motor Works] were given responsibility for working out the range of parts, determining the demand, planning for production, and distributing spare parts for automobiles from the Zaporozhye and Lutsk Motor Works. It was stipulated still earlier that the automobile technical service system is to be the general client and recipient of spare parts. Consequently, when we speak of satisfying orders from consumers, we have in mind namely the orders from republic automobile technical service organizations.

Formally, in their orders, these organizations must take into consideration not only the needs of their own STO [Technical Service Stations] and SATs [possibly Special Auto Repair Shops], but the needs of retail trade as well.

In other words they must take the overall needs in the republic as their starting point; that is, assume responsibility for satisfying demand for spare parts as a whole. But no such responsibility for automobile technical service has ever been placed on them, and the task now facing them--maximum increase in the volume of service within the limits of their working capital--objectively clashes with the task of providing spare parts to the populace through the retail system. Put yourself in the position of a STO director. Having a standard of working capital of, let's say 1.5 rubles per ruble in services, could you order mufflers at a cost of 40 rubles, when the most exacting installation of this part on a car (and removing the old one) costs 4 rubles 50 kopecks?

Is it not this difference in the cost of the parts and the amount which one can "earn" for them for services, that explains the absence of many of them at service stations and stores, and the absence of the elusive windshield wiper blades in particular, the installation cost of which amounts to zero? (And after all, it is namely the easily-removed parts that should be on sale everywhere above all, and they should cost less--then the automobile enthusiast would not have to resort to the demeaning procedure of removing and hiding his wiper blades whenever he makes a brief stop.) And wouldn't you, the service station manager, who practically loses his head for failing to fulfill the service plan, give a lot to be able to sell parts freely, and provide these services? And which parts would you order: those which the automobile enthusiast needs, or those which the service station needs? Thus, here the explanation lies in the paradox which exists when, with an annual 6-8 percent increase in the number of Zaporozhets in the country, the volume of orders from service stations for spare parts has not changed since 1983?

Thus we have a classical example of what results when rights are granted and the corresponding responsibilities are not assigned. What about it? Perhaps we can ask the government to assign to Automobile Technical Service the responsibility for providing spare parts as a whole and thus solve the problem?

Hardly. The fact of the matter is that the structure of auto service and its material base, and the relationship between the kinds and volumes of services evolved under conditions of a chronic shortage of spare parts. I would even say that to a certain extent auto service has been corrupted by this shortage in the sense that quite often the demand for services is in actual fact a demand for spare parts.

At present no one can say definitely what kinds of services and what part of them the consumer really needs, and which are actually the result of the notorious shortages. If the automobile enthusiast were able to freely acquire any parts, who can tell--perhaps construction of new service stations would be required in a number of places.

After all, growth in the volume of services cannot be an end in itself either, since society receives a great deal more returns from those who work in the sphere of material production; therefore, in taking away manpower altogether from the combine, the conveyer, the lathe, and the mine, and applying it to the sphere of services the state should clearly perceive the real



public need for the services in question. But then you see things could actually go so far, as one reader sarcastically suggested, that they'd start selling buttons only at shops which offer a sewing service as well.

Auto service must still learn to operate under conditions in which spare parts are readily available and for sale. You see, then they'd truly have to compete for customers.

It will require some effort in order to raise the quality of repairs to a height the "private" repairman cannot achieve, and at the same time make repair at a service station more advantageous to the client in a material sense. Emphasis should not be placed on simply replacing parts and components (especially costly parts which consume a lot of metal), but to overhauling them, which is of great interest to the state as well.

All of this calls for seriously restructuring the auto service system, and a psychological breakthrough. But it's hard to get anyone to agree to that voluntarily. Therefore, for auto service to create an abundance of spare parts--is the equivalent of cutting off the branch on which you are sitting.

Well then, perhaps this task should be bestowed on the cultural and sporting goods stores in the Ministry of Trade system? But this has already been rejected, and the existing practice of retail trade to this day, which is oriented primarily on goods turnover volume, is convincing proof of its inability to solve the problem.

Evidently the time has come to make the leading automobile manufacturing associations responsible for the entire series of events: from determining the range of goods and the demand, to production planning, distribution, and retail trade in spare parts.

Let's dream a little. Throughout the country, starting with the capitals of the union republics and the largest cities, and then in all oblast centers as well, a new type store appears--company stores for automobile associations. Their top priority goal is not goods turnover volume, but ensuring the supply of a sufficient amount of spare parts to automobile owners. Instead of the traditional kind of store, they would have a complete list of the entire range of goods along with information on the availability or the lack of every part. When necessary the sales consultant provides information to the purchaser about replacement parts, conditions for interchangeability of parts, and the like--upon which the salesperson-operators would, employing electronic computer microprocessor technology, immediately complete the order forms, which would be filled from the store's stockroom upon payment.

Electronic computer equipment not only reduces the amount of time spent for purchasing, it also maintains accountability of the stock on hand--based on the established levels of reserves, it determines the ordering point, and dispatches the order to central or zonal supply sources via communication circuits. For parts in short supply the store would establish a waiting list, subject to monitoring by the public.

A system of such stores, in combination with a well-organized mail order trade service, which would support primarily those who live in remote areas, would permit creating confidence among automobile enthusiasts in the fact that practically any part which goes out of order can be quickly acquired in any area of the country. And this in and of itself is one of the factors for a significant improvement in demand satisfaction, since the need for hoarding parts in millions of private garages would disappear. Administration of the entire system of company stores from a single "brain center" would provide the ability to react flexibly to demand fluctuations in different regions, and achieve the required result with minimal stocks of goods.

Seeing the organization of company stores as a most important means for fundamentally changing the situation with respect to providing spare parts for automobile enthusiasts, and not possessing the capability to build their own stores in the near future, AvtoZAS associations in December 1985 sent an appeal to the gorispolkoms of the capitals of union republics and oblast ispolkoms in the major cities (at 36 addresses) with a request to furnish accommodations for such stores.

One interesting detail: not one of the 19 replies received denied the necessity to improve the supply to citizens of spare parts for Zaporozhets automobiles; but only Rostov, Chita and Kuybyshev Oblispolkoms and the Tbilisi Gorispolkom agreed to furnish accommodations.

At present, following the adoption of the resolution on further development of company trade stores in the system of the industrial ministries, in which it was deemed expedient to concentrate all trade in spare parts for passenger cars in the company stores of the Ministry of the Automotive Industry, we are counting on greater understanding on the part of the local authorities. And one would hope that the fruits of this mutual understanding would be quickly felt by our automobile owners.

The guarantee of spare parts supply in company stores would permit overcoming the "acquisitive" mentality of automobile owners--and this would significantly reduce the actual demand for spare parts, inasmuch as it would permit bringing actual demand into line with estimated (reserve) demand. And thus the conditions would obtain for fastest possible solution of one of the most urgent problems in the services sphere--maintaining the fleet of personal automobiles in operating condition. Indeed, such an approach would meet the demands of today.

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## MARITIME AND RIVER FLEETS

### ECONOMIC MANAGEMENT CHANGES INFLUENCE SHIP REPAIR SECTOR

Moscow VODNYI TRANSPORT in Russian 24 Jan 87 p 1

[Article by V. Zhupanov, chief economist of Klaypeda Ship Repair Yard No 7, under the rubric "New Methods of Economic Operation": "Cost Accounting [Khozraschet]...With a Reservation," followed by a commentary by V. Pervov, chairman of the V/O Mortehtsudoremprom [All-Union Association for Shipbuilding, Maintenance and Repair]; first two paragraphs are VODNYI TRANSPORT introduction]

[Text] It is well known that profit, as the most important generalizing indicator and principal source which provides for their production and social development, forms the basis for the cost accounting activity of the shipping companies and enterprises of the Ministry of the Maritime Fleet. At the same time, a direct relationship is established between the resources and incomes which enterprises have at their disposal independently and the efficiency of their production activity.

This is what was shown at the departmental conference of supervisory employees of the ministry's central staff, shipping companies and ports, held in Klaypeda.

Citing the right of the MMF [Ministry of the Maritime Fleet] to establish indicators, limits and norms in five-year and annual production plans, the ministry has ruled out profit as a basic indicator for evaluating the activity of industrial enterprises (ship repair yards), fund formation and economic incentive. This practically abolishes the principle of full cost accounting for them.

The increase in output volume in the normative value of processing (NSO) was designated as the basic indicator for the work of industrial enterprises, as well as the fund-forming indicator for establishing an economic incentive fund through planned and above-plan profit.

The question arises: why are the employees of the Ministry of the Maritime Fleet central staff adhering to previous positions and why do they want to retain the NSO, which does not meet today's requirements, as the basic indicator for the SRZ [ship repair yards]?

The argument that the ministry fears a decline in the volumes of the NSO's for a number of plants is cited as the single justification for such a decision. We cannot share these apprehensions, and this is why.

Not one industrial enterprise and its labor collective will permit a decrease in the output volumes in the NSO's, since this will certainly entail a decrease in the planned wage fund and incentive funds. In addition, when profit is approved with specific rates of growth over the preceding year, an increase in output volumes also will be ensured, since most of the increased profit can be obtained through an increase in output volume. One more point is also important. The Ministry of the Maritime Fleet will be approving the indicator "Repair of civil seagoing vessels" and limits to ship repair for clients. The substance of this indicator is the same as the output volume in the NSO, only it has been expressed in the prices in effect. By planning an increase in accordance with this indicator, the ministry is reliably providing for verification of output volume in the NSO's, since the relationship of gross output in the prices in effect and the NSO is essentially constant.

With the approval of an increase in the volume of the NSO for plants, an increase in the overall wage fund will essentially be planned in a centralized way for them, since this is determined by an established standard from the increase in volume of the NSO.

The labor productivity indicator for ship repair yards will be calculated. But is this so? After all, a standard will be established for the relationship between the increase in average wage and the increase in labor productivity.

On the whole, it turns out that nothing is changed for the ministry's plants. By approving volumes of NSO's, the ministry must count all the calculated indicators in a centralized manner in order to calculate and confirm economic standards. It turns out that the number of approved indicators has not been reduced, but even increased, and not all indicators correspond to the standard regulations already approved on the formation of funds and payment of bonuses to supervisory employees. It is probably considered inexpedient and premature to give labor collectives at plants the right to independence.

Moreover, the current restriction on acquiring above-plan profitability of more than 1 percent for ship repair completely deprives the labor collective of incentive to economize labor and physical inputs by introducing the achievements of science and technology, advanced methods, and efficiency promotion, since the above-plan profit acquired is returned to the customers. At the same time, an adjustment is made in the reporting data toward a decrease for all indicators (the NSO; gross, commodity, and sold output; and profit). In other words, while the restriction on acquiring above-plan profitability is retained, achievement of the best end results is also restricted within the limits of 1 percent.

These restrictions include those cases where economy is achieved by improving dock facilities and acquiring a supplementary dock rate with a minor increase in expenditures to operate it.

We consider it correct to apply all the basic new principles of economic management methods for ship repair yards, and to approve profit, increase in labor productivity, sale of commodity output taking deliveries in accordance with contracts into account, and all economic standards and limits among the basic indicators.

\* \* \*

Commentary on the letter by V. Pervov, chairman of the V/O Morteckhsudoremprom:

Profit for shipping companies (enterprises) in accordance with cost accounting conditions really is a most important indicator and the principal source for production and social development. It is a most important indicator, but not the only one, however. Other no less important indicators, including quantitative ones which determine the planned volumes of transport work, are being approved for shipping companies at the same time.

The goal of ship repair yards, as is well known, is to repair the fleet, as rapidly as possible at the same time. In addition, construction of vessels for the auxiliary and service fleet and production of other types of industrial output necessary for the sector. Unfortunately, the yards are not achieving their basic objectives completely today. Shipping companies continue to experience shortcomings in ship repair, shipbuilding and machine building.

Based on this, the ministry also has developed a system of plan indicators and standards to ensure that the goal cited is achieved. In the process, a minimum number of indicators were examined and more rights in the planning area were granted to shipping companies and plants. Thus, three indicators and four fixed standards are being established for shipping companies' production activity in the five-year plan: the industrial output volume in the NSO, production of the most important types of output in physical terms in accordance with a limited products list and its delivery for export, goals for scientific and technical progress, the standard for increasing the overall wage fund, the standard for the wage fund for engineering and technical employees, the standard for the wage fund for designers and process engineers, and the standard relationship between the increase in average wage and the increase in labor productivity. But there are only three indicators in the annual plan: the industrial output volume in the NSO, production volume in physical terms, and objectives for scientific and technical progress.

I cannot agree with the author of the article, who maintains that profit should be the only fund-forming indicator and that the volume of industrial output in the NSO does not have to be planned. An enterprise is operating for the production and delivery of a specific quantity of output. It may be defined by the piece, in tons or other quantitative measures. There is no such physical measurement for the overall output of the Ministry of the Maritime Fleet's plants, and this is basically ship repair. For this reason, the normative value of processing is also taken as the overall measurement of output quantity for our plants.

This indicator reflects to the greatest extent the amount of output produced and makes it possible to determine the increase in the overall wage fund correctly. Where ship repair is critical, economic incentive to increase industrial output will make it possible to meet the shipping companies' demand for repair of vessels more expeditiously, to increase the fleet's technical condition and to improve its operational efficiency.

Profit will be planned for the plants by the shipping companies and will be the source for ensuring their economic and social development.

As far as restricting above-plan profitability for vessel repair is concerned, the author is correct in this. It has to be abolished. This matter is now being reviewed by the ministry leadership.

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## MARITIME AND RIVER FLEETS

### PROBLEMS PLAGUE NEW ARCTIC CARGO SHIP VITUS BERING

#### Defective Parts, Equipment

Moscow SOVETSKAYA ROSSIYA in Russian 5 Feb 87 p 1

[Article by A. Mikhasenko: "The Miscalculation of the Commodore: Why the Diesel Ship Vitus Bering Could Not Put Out on its First Voyage"]

[Text] Vladivostok--The residents of Vladivostok have been waiting for the diesel ship Vitus Bering with no less interest than geographers waited for the discoveries of the famous commodore in his time. The leading ship of the "Arkticheskiy snabzhenets" [Arctic Supplier] series promised seamen of the Far East many advantages in delivering cargoes to the regions of the Far North. Two helicopters on board, a stern ramp--a "gangway for equipment," air cushion platforms, impressive capacities for fuel and lubricants and perishable goods, a superstructure protected from vibration... Enthusiastic assessments increased interest in the unique vessel. V. Pervov, director of the All-Union Association Morteckhsudoremprom [shipbuilding, maintenance and repair], did not spare the epithets: "Ships of the Vitus Bering type have no equals in the world in technical capabilities and they are superior to all existing domestic icebreaker-transport vessels which are engaged in supply operations in the Arctic."

The giant ship left its Vladivostok berth on its first voyage last December. But in several minutes, the auxiliary diesel generator in the engine room fell apart, in the full sense of the word. Tugs pulled the diesel ship back to the cargo port berth, where it has been until now.

"It is impossible to provide a date now for conclusion of repairs," says V. Golubev, chairman of the interdepartmental commission investigating the causes of the breakdown. "Possibly in a month or three... The ship was built with the most flagrant violations of engineering procedure. Wherever you look there are flaws. The engines are new, and the Ministry of Heavy and Transport Machine Building is just beginning series production of them. But they fell into barbarian hands at the plant. They sealed off a hole in the connecting road by welding it!"

A 24-hour layover by the Vitus Bering costs the Far East Shipping Company 10,000 rubles. Plus the so-called "lost profit." For the seamen working since 1 January under cost accounting and self-financing, it is really ruinous. The shipping company is demanding reimbursement for immense financial losses from the manufacturer, the Kherson Shipbuilding Association. Neither a response nor a greeting has been heard from there. The forced anchorage has enabled the operating staff to more closely examine the unique vessel, if the papers are to be believed. The opinions expressed were critical. They all came down to one thing: the vessel has not justified expectations, and it has a substantial amount of unfinished structural work. V. Miskov, chief of the Far East Shipping Company, has given a detailed account of it in a report to the minister of the maritime fleet. Viktor Mikhaylovich enumerated them in our discussion:

"There are no Ka-32 cargo helicopters, which are capable of operating from the Vitus Bering, in the Far East. The cranes are of low capacity. We have not actually seen the air cushion platforms; they are only undergoing plant testing. Because of the immense cost of all the innovations, the vessel is obviously unprofitable. Is such a "supplier" really needed in the Arctic? If it were up to us, we would have flatly rejected it."

However, they did not listen particularly to the seamen's point of view. Otherwise, how can the obvious miscalculations in the project, worked out by one of the design bureaus to order for the Ministry of the Maritime Fleet, be explained? The hoisting capacity of the Vitus Bering's cranes, for example, is half the capacity requested by the seamen as long as 10 years ago. In addition, they are designed for operation in calm weather conditions! This sounds like mockery for the Arctic. In the opinion of the vessel's chief engineer, A. Koropatov, the reliability of the cranes is a match for the diesel engines that are broken down--they are absolutely unsuited for the North.

The shipbuilders are now ready to discuss objective problems. But isn't it time to call things by their right names? Let us emphasize that the Vitus Bering was sent to sea after everyone was shaken by the Admiral Nakhimov tragedy and requirements for vessels' navigation safety and technical condition were toughened. Who will bear personal responsibility? Judging by the positions of the representatives of departments concerned who came to Vladivostok, they are worried about their own safety first of all. It appears that not only the sectorial headquarters--the Ministry of the Shipbuilding Industry, the Ministry of Heavy and Transport Machine Building, and the Ministry of the Maritime Fleet--but the organs of the public prosecutor should provide an assessment of the unprecedented situation, based on principle.

As far as a miscalculation is concerned, the legendary commodore made one, in fact. He turned back, without reaching the mouth of the Kolyma, although his young associate Chirikov persisted. Aleksey Ilich went farther than his teacher. But what will be the fate of the Aleksey Chirikov, which is just about to slide down the ways? After all, it is an exact copy of the Vitus Bering! Moreover, the foundations have been laid for two more maritime "twins" by the shipbuilders, working with the flowline-position method. The desire to call it the defective-position method suggests itself whether we



like it or not, inasmuch as there are no guarantees that more tens of millions of rubles won't be cast to the wind.

#### Various Problems Detailed

Moscow VODNYI TRANSPORT in Russian 14 Feb 87 p 2

[Article by VODNYI TRANSPORT Vladivostok correspondent A. Mikhasenko: "The Suffering of the Ice Giant, or About Personal Responsibility for Making State Decisions"]

[Text] The new diesel ship Vitus Bering greeted the cold December morning in Vladivostok. The sailors had barely secured the ladder when members of the commission began hurrying on board. But not for the purpose of congratulating the crew on its safe arrival at its port of registration. An alarming radio message from sea had brought them here--auxiliary diesel generator No 1 had broken down between Kherson and Vladivostok, in the Red Sea. This brief report caused a real commotion at the Pervomayskiy Machine Building Plant imeni 25 Let Oktyabrya and in the Kherson Shipbuilding Production Association, where the Vitus Bering had come down the ways.

While the vessel set course for the Maritime Kray on a standby diesel, accompanied by the container carrier Alisher Navoy as insurance, machine builders and shipbuilders were already flying across the entire country. Since Aeroflot did not take a spare diesel generator as baggage, it had to be sent after the representatives by rail.

So what happened in the Red Sea? They were lucky with the weather--the Vitus Bering went around the storms and typhoons. Nevertheless, the emergency warning was triggered, reporting the diesel breakdown, and Chief Engineer A. Koropatov rushed to the engine room.

"We started the standby diesel first of all," recalls Aleksandr Petrovich. "Then we began looking into the cause of the breakdown. The engineers determined that the crankshaft had flown off because a bushing had turned, and that repair at the plant is required.

That was the most serious breakdown, but far from the only one on the voyage. Cracks appeared in the high-pressure couplings soon afterward. The current was cut off unexpectedly during its anchorage in Singapore. During the unloading of coiled steel in Manila, an oil line gasket broke on one of the ship cranes... In correcting the breakdowns and workmanship flaws, the seamen had unkind words for the shipyard. Only at home, in Vladivostok, did the crew get its rest, but not for long.

While the new diesel was on its way east, they decided to send the vessel on its first working voyage. The Vitus Bering did not put out to sea before diesel generator No 3 fell apart. A heavy connecting rod broke, nearly killing persons nearby.

We set out for the fourth berth, where the vessel had been tied up for nearly 2 months. We come on board over a pathway jammed with numerous inspectors. V.

Golubev, the representative of the interdepartmental commission of the USSR Ministry of the Maritime Fleet, has an answer to the question of who is specifically responsible for what has happened.

"In both cases, components of the machinery were manufactured with defective material and with the most flagrant engineering violations. To start with, careless workers make a hole in the connecting rod which was not called for in any plans, and then fix it by welding, which is categorically forbidden! The plant numbers for the diesels are 1, 2 and 3. Manufactured domestically, the new diesel was put into series production by the Ministry of Heavy and Transport Machine Building at the Pervomayskiy plant and did not even undergo full-fledged bench testing."

One can only guess at the times for completing repairs. The register advanced stringent and fully justified requirements for the manufacturers: until there are guarantees that the diesels will operate reliably, the ship will not put out to sea.

Yu. Danilov, chief engineer of the Pervomayskiy Machine Building Plant, attempts to save the enterprise's reputation:

"We admit that the connecting rod is defective, and we will severely punish those at fault. But..."

And later we heard the seamen and the shipbuilders being reproached: they violated the rules of operation, and this is the source of all the trouble, he says. Plus the poor quality of the metal and components, and so forth.

"We were acting under instructions!" insists the chief engineer of the Kherson association, S. Filippov. "We do not intend to answer for someone else's defective output. We supplied what we received from workers at an associated plant."

As we see, members of the commission did not arrive at a common opinion. This is also understandable. For the shipowner to admit he is to blame means assuming immense financial losses. The Vitus Bering cost 40 million rubles to build, and 24 hours of idle time amounts to 10,000 rubles for the Far East Shipping Company. Plus the lost profit--the vessel should bring in a profit, after all.

"We are demanding that the plant reimburse on the order of 2 million rubles for the damage," G. Krasilnikov, chief of the juridical department of the DVMP [Far East Shipping Company], states. "There has been no response to our claim. After 2 months of idle time we will demand 4 million. If this is rejected, we will appeal to the Gosarbitrazh [State Board of Arbitration]."

Most likely it will be that way, too. After all, the arguing sides are worried today about the very question of who is to pay such immense sums. But a ChP [emergency] at sea is considered as a "private" matter. In the final analysis, they will bring the engine "up to form," deprive those who handled the welding and drilling of bonuses and the 13th wage payment, and penalties for managers will be announced... Perhaps the seamen will receive their

millions even without arbitration intervention. But where is the guarantee that the chain of irresponsibility will be broken with this, that narrow departmental interests will not again get the upper hand over the interests of the work? After all, the fate of the entire series of vessels, of which the Vitus Bering was the first, has been reflected in the story of the defective diesel, in our view.

The diesel vessel was designed as the latest word in domestic shipbuilding. Two helicopters based on board, air cushion platforms, equipment travels directly into the hold by a stern ramp where there is shore ice, impressive capacities for fuel and lubricants and a refrigerated hold, a superstructure protected from vibration, dual-glazed portholes... In a word, a dream!

Ships of the Vitus Bering type have no equals in the world in technical capabilities and they are superior to all existing domestic icebreaker-transport vessels which are engaged in supply operations in the Arctic." Such loud praise characterized the transport in the report to Minister of the Maritime Fleet Yu. Volmer from V. Pervov, chairman of the All-Union Association Mortehtsudoremprom, and he is the primary customer for the Vitus Bering.

How then are we to understand the opinion of another specialist, V. Zharavin, chief of the Fleet Operations Administration of the Far East Shipping Company, which was unfortunately stated after the emergency:

"The Register intends to restrict the Vitus Bering's area of navigation because of the vessel's unreliability. It will have to be operated for "the short haul." But the fleet can be utilized 10 times more cheaply for this."

Let us assume that the plant corrects the defective output and the vessel leaves for the Arctic. Will it cope with the tasks with which it is charged? We see quite a few design shortcomings even at the berth. For example, four cranes with hoisting capacity of 12.5 tons each have been installed on board. Together they will be able to lift a 40-ton barge and lower it to the water, if there is...calm weather. But who has seen such ideal conditions in the Arctic? As long as 10 years ago, when the project was only being developed, seamen asked that cranes of twice the capacity be installed. Their opinion was not taken into account. And what are the working conditions like on these cranes? The cabin and engine room is not even heated--and this is for temperatures of 40 below zero. There are more than enough miscalculations such as this on the ship.

According to the plan, two helicopters situated on the vessel would deliver cargoes to a shore that has no facilities. But the first Ka-32 is still just being tested at Murmansk. And even their effectiveness in operation will be significantly less than what was planned: the helicopter is capable of taking cargoes from only two points on the deck. Additional cargo-handling facilities will be needed on board. Further, in the opinion of specialists, the diesels do not possess the power needed for such a vessel under Arctic navigation conditions.

"The principal elements of a supply (cargo) ship are lacking here," concludes V. Miskov, chief of the Far East Shipping Company, in his report for the minister. The sentence resembles a line from a verdict. On the other hand, it sounds based on principle. But this adherence to principle is hopelessly late. Where were the representatives of the customer and the Ministry of the Maritime Fleet earlier, when the new series of Arctic supply ships was only being created on the drawing board? Why did they accept the vessel in such "raw" form for operation last October? A large number of defects and observations on the quality of a number of important units and the assembly and installation of equipment were brought out during the running trials on the Black Sea, in which more than 200 specialists took part. In spite of all this, V. Sheremet, chairman of the acceptance commission and chief of the technical department of the Far East Shipping Company, signed the document giving the vessel a "permit to operate" all the same.

"We accepted the vessel in accordance with the specifications approved by the ministry," Viktor Fedorovich states today, clarifying his position.

Yes, and you won't find anything extreme here...

Building the Arctic fleet's new generation is one of the fundamental directions set by the 27th CPSU Congress in resolving the problems of accelerated development of regions in the Far North and the Far East. The state is sparing neither assets nor efforts for this. After all, the seamen in the Arctic often are compelled to work under extreme conditions. This is why the question of the pros and cons of the Vitus Bering goes far beyond the bounds of purely technical and design miscalculations. It attests to the serious miscalculation of a number of sectorial ministries in their approaches to developing new equipment, and it attests to the inadequate level of responsibility.

"We are making the decisions needed, but as before, we are not carrying them out completely in the established periods of time. This is also taking place because many persons still have not freed themselves from the burden of old habits and an irresponsible relationship toward their duties..." The words of M. S. Gorbachev, spoken to machine builders at the January Plenum of the CPSU Central Committee, may be addressed to all participants in this long story.

They are waiting for the next commission on the Vitus Bering; the previous ones could not arrive at a common opinion. At the same time, construction of the Aleksey Chirikov, an exact copy of the first vessel, is being completed in Kherson. The Far East Shipping Company is sounding the alarm in advance and asking the ministry to send it to Murmansk. Out of harm's way, as they say...

And who will get three more "ice giants" in the building slips? Who has "spare" millions?

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END